THE ORCHID ALBUM.

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THE

ORCHID ALBUM,

COMPRISING

COLOURED FIGURES AND DESCRIPTIONS

OF

NEW, RARE, AND BEAUTIFUL

ORCHIDACEOUS PLANTS,

CONDUCTED BY

ROBERT WARNER, F.L.S., F.R.H.S.,

AUTHOR OF SELECT ORCHIDACEOUS PLANTS,

HENRY WILLIAMS, F.L.S., F.R.H.S.,

AND

WILLIAM HUGH GOWER, F.R.H.S.

THE COLOURED FIGURES BY JOHN NUGENT FITCH, F.L.S.

VOLUME X.

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1894

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AT THE

VICTORIA AND PARADISE NURSERIES, UPPER HOLLOWAY, N.

MDCCCXCIII.

DEDICATED

BY SPECIAL PERMISSION

TO

H.R.H. The Princess of Wales,

BY

HER ROYAL HIGHNESS'

Very obedient and humble Servants,

ROBERT WARNER,

HENRY WILLIAMS.

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J. Nugent Fitch del. et lith.

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LÆLIA PRÆSTANS .

LÆLIA PRÆSTANS.

[PLATE 433.]

Native of Santa Catarina, Brazil.

Epiphytal. A dwarf slender-growing plant, forming a horizontal rhizome, from which proceed roots on the lower side, and above small terete pseudobulbs, which are clothed with sheathing scales; they are oblong, marked with slightly depressed parallel lines, some two inches in length, and bearing on the apex a single lead which is linear oblong, coriaceous in texture, about five inches in length, and one inch in breadth, deep green. *Peduncle* arising from a large sheath at the base of the leaf, and bearing a single flower which measures some four inches or more across. *Sepals* oblong, acute, spreading; *petals* ovate, much broader than the sepals, all of a rich deep rosy purple; *lip* large, three-lobed, thick and fleshy texture, trumpet-shaped, the side lobes enclosing the column and overlapping, middle lobe reflexed, deep rich purple, the throat orange-yellow. *Column* triquete.

LÆLIA PRÆSTANS, *Reichenbach fil, Flore des Serres*, xviii., t. 1900. *Botanical Magazine*, t. 5498. *Bateman's 2nd Century Orchidaceous Plants*, t. 128. *Reichenbachia*, series ii., vol. i., t. 6.

CATTLEYA PUMILA MAJOR, *Illustration Horticole*, t. 193.

BLETIA PRÆSTANS, *Reichenbach, Xenia Orchidacea*, ii., t. 114. *Walper's Annales, Botanicæs Systematicæ*, vi., 325.

The plant here depicted is somewhat rare in collections; there appears however, to be some differences of opinion respecting its specific distinction. Some authors make this to be only a variety of *Lælia pumila*, which is variously known as *Cattleya pumila, C. marginata, C. Pinelii, C. spectabilis*, etc., etc., but we think there is sufficient character about it to warrant us in adopting the specific distinction given it by Reichenbach in the first instance. It is now about fifty years ago since the plant was first introduced to European gardens, having been found growing upon the stems and branches of trees in Santa Catarina, at some 2,000 to 2,500 feet elevation. The specimen from which our illustration was taken, flowered with us in our own establishment, the Victoria and Paradise Nurseries, in the month of October, in the year 1890; and we have frequently observed that when the plant likes its surroundings, and is growing strongly and vigorously, it will produce two crops of bloom in one season, flowering first in the late spring months, after which it grows again, flowering on the new growths towards the end of autumn.

Lælia præstans is a dwarf evergreen plant, which from growing at considerable elevations, must not be placed in too high a temperature; in fact, we have observed

that during the summer months the plant succeeds well in the warm end of the Odontoglossum house, hung up close to the roof-glass, but shaded from the direct rays of the sun during the hottest part of the day. During the growing season it delights in an abundant supply of water to its roots, but the drainage must be in good working order, so that it may be carried away quickly, and at the same time the atmosphere should be maintained in a moist and growing state. After blooming, water should be withheld to a great extent, but on no account must the plant be so dried as to cause it to suffer from drought, for when this occurs much mischief is done, causing it to shrivel, from which state it is frequently very difficult to get it to start into fresh growth in the following spring. During the winter the atmosphere must be maintained in a dry state, and the temperature should not be allowed to fall below 55° or 60°. The soil should consist of good peat fibre and some sphagnum moss, adding some nodules of charcoal, but very little soil is necessary, and this should be made firm and sound. A small white scale is very apt to infest this plant, and if not cleaned away in time it works sad mischief; so look the plant or plants over carefully and frequently, wiping away this or any other insect which may be upon them.

Awards made by the Orchid Committee of the Royal Horticultural Society, for the Second Quarter in the Year, 1891.

April 14th. *First Class Certificate* to Norman C. Cookson, Esq., Wylam-on-Tyne, for *Dendrobium* "*Venus*," a cross between *D. nobile* and *D. Falconeri*, the flowers of which very much resemble those of *D. Falconeri giganteum*.

First Class Certificate to Baron Schröder, The Dell, Egham, for *Epidendrum Dellense*, a hybrid between *E. xanthinum* and *E. radicans*; the flowers are of a rich orange-scarlet, larger than *E. xanthinum*, but very much resembling that species in shape; a very fine variety.

First Class Certificate to Baron Schröder for *Odontoglossum Dellense*, a supposed natural hybrid between *O. Pescatorei* and *O. prænitens*; it resembles somewhat a densely spotted form of *O. excellens*, the chief difference being in the crest and the column.

April 21st. *First Class Certificate* to Sir Trevor Lawrence, Bart., M.P., for *Odontoglossum Pescatorei* "*Prince of Orange*," a very beautiful form, having the ground colour of rich yellow, the sepals and petals freely spotted with chocolate.

First Class Certificate to J. Larkin, Esq., Delrow, Watford, for *Oncidium Larkinianum*, a beautiful form which was figured by us on plate 405, vol. ix., to which we would beg to refer our readers.

May 28th. *First Class Certificate* to Sir Trevor Lawrence, Bart., M.P., Baron Schröder, and Mr. F. Sander for *Aërides Savageanum*, a species introduced by the last named. The flowers are somewhat small, of a brilliant crimson; it is a very distinct and handsome species, evidently different from anything known.

(*Continued under Plate* 434.)

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ODONTOGLOSSUM ROSSII ALBENS.

ODONTOGLOSSUM ROSSII ALBENS.

[Plate 434.]

Native of Mexico.

Epiphytal. *Pseudobulbs* somewhat oblong-ovate, slightly compressed at the edges, smooth when young, becoming slightly wrinkled with age. *Leaves* produced singly, oblong-lanceolate, carinate beneath, and light green in colour. *Scape* some four or five inches long, bearing a thin boat-shaped bract at the joints. *Flowers* mostly in pairs, some three inches across; *sepals* lanceolate-acuminate, white, transversely banded with soft green; *petals* oblong, much broader than the sepals, but like them white, with a few transverse blotches of soft green towards the base; *lip* cordate, white, undulate on the margin, and having a yellow crest. *Column* wingless.

Odontoglossum Rossii albens, *supra.*

The plant here figured is a variety of *Odontoglossum Rossii majus*, which has been imported so largely during the past few years, and become such a favourite through its free-flowering habit and the length of time the blooms remain in full beauty. From these have appeared some fine variations from the typical plant, and the one now before us is the second plant only which has come under our notice, so that we look upon it as a somewhat unusual form of the plant. It is upwards of fifty years ago that the typical plant was first introduced from Mexico by Mr. Barker, of Birmingham, who, by the way, seems to have been a successful importer of the genus in the early days. No less than five species can be credited to him, viz., *O. cordatum*, *O. citrosmum*, *O. Insleayi*, *O. maculatum*, and the present one, *O. Rossii*, the last one being named after his collector, who found this species growing in the greatest abundance all over the country about the Oaxaca district; this form, however, we cannot think was the *majus* variety found by Roezl in the Orizaba district later on, and out of which so many fine forms have sprung. Doubtless Mr. Barker suffered from the same difficulty which bothered the majority of Orchid growers in the early days—the excessive heat which was then deemed of the greatest importance, whilst *O. Rossii* is one of the coolest Orchids we have; in fact, we saw some plants flowering beautifully in May last, which had been wintered in a house that frequently was frozen during the very severe winter we experienced. We do not advocate such severe tests of endurance for these plants, because we entirely disapprove of subjecting them to so low a temperature, and only quote the fact of their withstanding it with impunity. For the pleasure of figuring this variety we are indebted to the kindness of R. Young, Esq., Fringilla,

Linnet Lane, Liverpool, to whom, with his gardener (Mr. Poyntz), great praise is due for the manner in which the plants are grown at his place, and we congratulate Mr. Young upon the new and superb varieties which are constantly appearing amongst his fine collection.

Odontoglossum Rossii albens is a small-growing evergreen plant, the flowers being wholly white saving some transverse markings of soft green. Its blooming season is in the late winter and early spring months, continuing some six weeks in full beauty; the flowers last also a considerable time when cut for personal adornment. This variety, like many of the small-growing species, thrives best when grown in a shallow pan or small basket, which should be suspended near the roof-glass, so that it may get the benefit of all the light possible, but we prefer the shallow earthenware pan before anything for these plants. The drainage should be effectual, and the best soil for the plant or plants is a mixture of fibrous peat, having all the finer particles shaken out, with some chopped sphagnum moss added; the whole should be well mixed, and in potting this must be pressed down firmly. During the summer, which is their growing season, an abundant supply of water is necessary, but during the winter they may be kept comparatively dry.

Awards made by the Orchid Committee (*continued from under Plate* 433).

First Class Certificate to J. Ingram, Esq., Elstead House, Godalming, for *Oncidium loxense*, a very beautiful old species, of which we hope to give a plate in the next number. It has a long scape and numerous large flowers, which have the sepals and petals nearly equal, the former with a greenish yellow ground profusely banded with brown; the petals are wholly brown saving the marginal border and the tips, which are yellow; the large lip is thick and fleshy, rich deep yellow, and having several bristle-like teeth which constitute the crest.

First Class Certificate to Mr. F. Sander for *Grammatophyllum Measuresianum*. This is a beautiful dwarf species bearing many flowers on the spike, the ground colour of which is greenish yellow blotched and tipped with brownish purple; it is a welcome addition.

First Class Certificate to Mr. F. Sander for *Masdevallia Mundyana*, the result of a cross between *M. ignea aurantiaca* and *M. Veitchiana*, with handsome flowers of a rich orange.

First Class Certificate to Mr. F. Sander for *Cattleya Lowryana*, a supposed natural hybrid, which resembles *C. intermedia* very much, the flowers being white, saving the middle lobe of the lip, which is deep crimson with a tinge of purple.

First Class Certificate to Mr. F. Sander for *Cattleya Prince of Wales*, a cross between *C. calummata* and *C. Wagnerii*; the first named parent is a light variety, and the result is a perfectly white flower saving the lip, which is suffused with rose.

(*Continued under Plate* 435.)

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RENANTHERA ROHANIANA.

RENANTHERA ROHANIANA.

[PLATE 435.]

Native of Borneo.

Epiphytal. *Stem* stout, ascending, furnished with numerous lorate obtuse leaves, which are firm and leathery in texture, and rich deep green. *Spike* axillary, simple, pendulous, hispid, many-flowered. *Flowers* dimorphous, the four basilar ones more thick and fleshy, with a ground colour of rich orange-yellow, freely and thickly spotted with blackish purple, the ordinary flowers some two-and-a-half to three inches in diameter; the *sepals* and *petals* nearly equal, lanceolate, undulated on the edges, acute, ground colour white, freely blotched with large marks of dark blood colour; *lip* three-lobed, saccate, fleshy, the side lobes somewhat quadrilateral, middle lobe tripartite, crest turned backwards. *Spur* entirely wanting.

RENANTHERA ROHANIANA, *Reichb. fil, Xenia Orchidacea*, 1854, i., p. 89; *Revue Horticole de France*, 1879, p. 210, with coloured plate.

The plant here depicted is by no means a new discovery, it having flowered for the first time in Europe in the gardens of the Prince Camille de Rohan, at Sichrow, in Bohemia, nearly forty years ago, and to whom it is dedicated; it is, however, one of the rarest species in cultivation, and at the same time one of the very handsomest species which we have in our collections. It is closely related to the plant named *Vanda Lowii*, by Lindley, which has been removed to *Renanthera* by Reichenbach, and more recently by Bentham to the genus *Arachnanthe*, but as this latter genus is a synonym of *Renanthera* we cannot do better, we think, than conform to the name under which the German Professor originally described it. The present plant, like *Renanthera Lowii* and its varieties, is remarkable for a curious dimorphism of its flowers, as will be seen by a glance at our plate. Two kinds of flowers are always developed upon the same inflorescence, and this curious feature does not appear to be accidental, as it is of constant occurrence, neither does it appear to be functional, for the two kinds of flowers have been proved to be equally perfect, and there is no sexular difference. The mystery therefore remains; perhaps it can only be solved in its native forests. As before remarked, its nearest ally is *R. Lowii*, from which it would appear to differ in having shorter leaves, in flowering before attaining the size and age of that species, and in having four basilar flowers differing both in shape and colour from the other blooms upon the same raceme; whilst in *R. Lowii* two of these altered flowers would seem to be the usual number.

We are indebted to the kindness of the Duc de Massa, Chateau de Franconville, *par* Luzarches, France, for the opportunity of figuring this grand plant; and Mr. Talluè, the gardener, is to be highly commended for the grand condition in which the whole collection is maintained. This plant was purchased by M. Le Duc from the collection of the late M. Luddeman, of Paris, and we understand is unique.

Renanthera Rohaniana is an evergreen plant with distichous leaves, and in every respect its habit is similar to that of the *Vanda*, but the flowers differ from that genus in having a pointed and moveable lip, which is destitute of any spur. The plant being a native of the warmest and moistest part of Borneo, it is natural to infer it thrives best under cultivation in the heat of the East Indian house; but it is quite surprising to see the low temperature these plants put up with during winter with impunity. We know a plant of *R. Lowii* which has been subjected to as low a temperature as 58° and 60° during the last three or four years, suffering only in not developing its flower spikes, but the general health of the plant is not diminished. The flowers of this plant are borne upon long pendent spikes, those at the base being four in number, the ground colour being rich orange-yellow, thickly spotted with purplish black. A considerable space is bare between these and the ordinary flowers, which are narrower, much undulated at the margins, and entirely of a different colour, having a white ground thickly blotched with large and irregular markings of blood-red. The plant likes a moist atmosphere when growing; and during the winter, if treated cool, great care must be exercised in giving it water, but under no circumstances must it be allowed to suffer.

AWARDS MADE BY THE ORCHID COMMITTEE (*continued from under Plate* 434).

JUNE 9th. *First Class Certificate* to Mr. F. Sander, St. Albans, for *Miltonia vexillaria "Mrs. H. Ballantine."* A fine flower; the sepals are white, and the petals light crimson, the lip being also of a rich crimson; it is a very bright and cheerful flower.

First Class Certificate to Mr. F. Sander for *Lælia Arnoldiana*, a cross between *L. purpurata* and *Cattleya labiata;* a fine flower obtained from seed sown ten years ago, the sepals and petals soft purple, and the front lobe of the lip deep crimson.

First Class Certificate to Messrs. Veitch and Sons, Chelsea, for *Disa Veitchii*, a cross between *D. racemosa* and *D. grandiflora;* flowers large, bright rose-pink, the plant being twenty-one months old.

First Class Certificate to Baron Schröder for *Sobralia macrantha Kienastiana*, which has pure white flowers, and is a very desirable plant.

JUNE 23rd. *First Class Certificate* to Messrs. B. S. Williams and Son for *Dendrobium Phalænopsis Statterianum*, which is a rich deep purple flower, being darker in the throat; very round and handsome in form.

(*Continued under Plate* 436.)

J.Hugent Fitch del.et lith.

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THRYXPERMUM BERKELEYI

THRIXSPERMUM BERKELEYI.

[Plate 436.]

Native of the Malay Islands.

Epiphytal. *Stem* slender, very slow in growth, bearing numerous distichous leaves, which are spreading, ligulate, obtuse, slightly notched at the apex, keeled beneath, and dark green. *Racemes* pendent, many-flowered, the flowers small, creamy white, the lip stained with mauve; *dorsal sepal* somewhat hooded; *lateral sepals* oblong, obtuse, and spreading; *petals* larger than the sepals, inversely ovate, all being thick and waxy in texture; *lip* saccate, three-lobed, side lobes small, erect narrowly falcate, middle lobe bearing two horn-like projections. *Column* short, and with the beaked anther resembling the head and neck of a bird.

Thrixspermum Berkeleyi, *Reichb. fil, Gardeners' Chronicle,* 1882, xvii., p. 537.

Sarcochilus Berkeleyi, *Hook. fil, Flora of British India,* vi., p. 37.

The plant now under consideration is very interesting and delicately handsome. It is one of the many discoveries of Major-General E. S. Berkeley, to whom it is dedicated, and who found it scattered over several of the islands in the Malay Archipelago, growing epiphytal on the stems and branches of trees. We have retained it here, in the genus to which it was referred by Reichenbach, as we cannot see why this name is more objectionable than many of those through which the various species have been distributed by authors; and, moreover, it claims to be the first name established. The following are a few of the genera under which many of the Thrixspermums are to be found, and we do not think they can claim much in regard to euphony:—*Chiloschista, Dendrocolla, Sarcochilus, Ornitharium,* etc. The present figure was drawn by our artist, Mr. John Nugent Fitch, from a plant sent from the gardens of Major-General Berkeley, at Bitterne, Southampton, where many rare and curious plants exist, and where the plants are carefully tended by Mr. Godfrey, the gardener. We may mention, in passing, that the town of Southampton has just sustained a great loss in the death of H. J. Buchan, Esq., who was certainly the premier Orchid grower of the district; indeed, we have noticed in his gardens the very strongest and largest-bulbed Odontoglossums seen by us in any collection.

Thrixspermum Berkeleyi, as may be inferred, is not a large-flowered and startling beauty, for its flowers are not more than an inch or an inch-and-a-half across the widest part. Its leaves seldom exceed six or eight inches across; the raceme

is pendent, the flowers much crowded upon the stem, and, as before stated, measuring an inch or an inch-and-a-half across; these are thick and waxy in texture, but we could not perceive any perfume arising from them. As the flowers of many Orchids are odoriferous at various times in the day and night, we can only say that at no time when we tried the plant did we perceive any odour. The plant is very free-flowering, and the bloom lasts a long time in perfection. It should be grown in small hanging earthenware pans, which should be well drained and hung up near the roof-glass, in order to let the plant have as much light and air as possible, but yet it must be shaded from the direct rays of the sun through the middle of the day. A little chopped sphagnum moss and some nodules of peat fibre and charcoal will be all that is necessary about its roots, but the plant must always be kept moist during the summer season by dusting with water from the syringe, a moist atmosphere, and by water to its roots; and in the winter by more careful attention to its wants. Under no circumstances should the plant be allowed to suffer through drought, and a warm part of the East Indian house suits it at all times.

Awards made by the Orchid Committee (*continued from under Plate* 435).

First Class Certificate to Lord Rothschild, Tring Park, for *Lælia grandis, Tring Park variety.*

First Class Certificate to Sir Trevor Lawrence, Bart., M.P., for *Odontoglossum crispum guttatum*, a fine spotted form.

First Class Certificate to E. Gotto, Esq., Hampstead Heath, for *Lælia Gottoiana*, flowers of large size, a supposed natural hybrid.

Awards of Merit.

April 14th. To Mr. F. Sander, St. Albans, for *Lycaste Mastersiana;* flowers rich yellow, spotted and dotted on the petals with orange.

May 12th. To Gustav Le Doux, Esq., Langdon House, East Moulsey, for *Odontoglossum Hallii leucoglossum*, an extra fine form, the lip being large and pure white.

To F. Wigan, Esq., Clare Lawn, East Sheen, for *Phalænopsis speciosa Imperatrix*, flowers large, and of good shape, and rich deep purplish mauve in colour.

To J. W. Temple, Esq., Leyswood, Groombridge, for *Cattleya Schroderæ, Temple's var.*, with the sepals and petals of a soft and pleasing shade of rose colour, the lip dark rose, the throat orange-yellow and prettily fringed.

To E. G. Wrigley, Esq., Howick House, Preston, for *Odontoglossum crispum Wrigleyanum;* the sepals and petals rich mauve, profusely spotted and blotched with reddish brown.

To Malcolm Cook, Esq., Kingston Hill, for *Cattleya Mossiæ gigantea*, a very large and soft-coloured flower.

(*Continued under Plate* 437.)

CYMBIDIUM PENDULUM.

[Plate 437].

Native of Northern India.

Terrestrial. *Pseudobulbs* small, ovate, enveloped by the imbricating bases of the leaves. *Leaves* numerous, distichous, ensiform, erect, obliquely-retuse, thick and coriaceous in texture, nerveless, channelled above, carinate beneath, some two feet long, rich green. *Racemes* pendulous, many-flowered, furnished with minute bracts at the base of each peduncle, flowers somewhat laxly set. *Sepals* and *petals* linear-oblong, nearly equal, tinged with reddish brown towards the base; *lip* three-lobed, the lateral lobes acute, erect, but not enclosing the column, rosy red streaked with lines of purple, middle lobe oblong, recurved, white, bordered in front with rosy red, and bearing two yellow crests upon the white disc. *Column* arching, stout, and of a richer deep purple hue.

Cymbidium pendulum, *Lindley, Botanical Register*, 1840, t. 25; *Williams' Orchid-Grower's Manual*, 6th ed., p. 235.

Epidendrum pendulum, *Roxburgh, Plants of Coromandel*, i., p. 35, t. 44.

It is now upwards of fifty years since this plant was first introduced to the gardener's attention in this country, so that until quite recently, when the genus got a fresh start with *Cymbidium Lowianum* from Burmah, it was a difficult task to find this plant in any garden, large or small; but at the present moment a good variety is sure to find an admirer, for blooming as it does through the autumn months, it serves to connect the summer and winter bloomers, and coming in just at a happy season, when flowers of any kind are specially welcome, its charming blooms are doubly appreciated. For the opportunity of figuring this fine variety of *C. pendulum* we are indebted to the kindness of J. Wilson, Esq., Bantaskin, Falkirk, N.B., in whose extensive collection this beautiful old plant flowered admirably in the month of September, 1888, and, we have no doubt, in the following seasons it has been equally beautiful.

Cymbidium pendulum is a bold-growing evergreen plant, which requires a great deal of bad usage before it succumbs. We well remember having some plants of the kind several years ago, which were subjected to a course of treatment which would have quite destroyed any other plant, and the same specimens are now thriving and doing well, which gives a convincing proof that some of the Orchids that come to this country last for a number of years. The plant is said to come from Sylhet and other places in Northern India, and grows well in a medium heat, but it does not object to a pretty strong heat during its growing

season; thus we have seen this plant thriving in an ordinary greenhouse and in a pine stove in the same garden, but the plant in the latter house was growing the fastest and the best. During the winter season it appears to like a thorough and severe resting, such as few Orchids can withstand, but such treatment should be carried out with forethought and care, if the plant is to appear creditable after the resting season. We recommend the plant to be kept in the Brazilian house during the winter, and during this season very little water will suffice, but during the summer season the plant enjoys an abundance of water and heat; it will not injure this plant if it is stood under the full influence of the sun's rays without any shading whatever. It is a strong-rooting plant, so that larger pots than usual are necessary to accommodate it; drain these well, and use for soil half good turfy peat and loam; pot firmly, and elevate the plant slightly so as to provide for its pendulous spikes.

Awards made by the Orchid Committee (*concluded from under Plate* 436).

Awards of Merit.

May 28th. To T. Statter, Esq., Standhall, Whitefield, Manchester, for ***Lælia elegans Statteriana***, having pure white sepals and petals, and a very broad bright crimson lip; a magnificent form.

To Mr. F. Sander, for *Odontoglossum crispum Amesianum*, which is a superb variety, having the sepals and petals freely blotched with crimson.

To Messrs. Hugh Low and Co., Clapton, for *Dendrobium Parishi albens*, a nearly pure white flower, the first white form that has been found of the typical plant.

To Mr. F. Sander, for *Odontoglossum excellens Sanderæ*, an excellent form, with large flowers profusely spotted with bright crimson.

To Sir Trevor Lawrence, Bart., M.P., for *Masdevallia luteo-oculata*, a fine scarlet flower, with a yellow tube and eye.

To Messrs. Heath and Son, Cheltenham, for a large form of the typical *Cypripedium Stonei*, called ***magnificum***.

To Mr. F. Sander, for *Cypripedium Euryale*, a very handsome variety, a cross between *C. Lawrenceanum* and *C. superbiens*.

June 13th. To Malcolm S. Cook, Esq., Kingston Hill, for *Lælia elegans*, ***Cullimore's variety***, having sepals and petals white with a suffusion of dull purple, the lip deep crimson.

To Sir Trevor Lawrence, Bart., M.P., for a good form of *Cattleya Mossiæ*.

To Mr. R. B. Cater, Westfield, Bath, for *Cattleya Mendelii*, ***Morgan's variety***.

June 27th. To Mr. F. Sander for *Læcena bicolor*, an old plant introduced nearly fifty years ago, which some of our contemporaries call a new plant; it has creamy white sepals and petals, and deep purple lip. Also for *Odontoglossum luteo-purpureum illustre*, of large size, and with deeply-coloured markings.

CYPRIPEDIUM NIOBE.

[Plate 438].

Garden Hybrid.

Terrestrial. A dwarf hybrid plant obtained between *Cypripedium Spicerianum* and *C. Fairrieanum*. The *leaves* are oblong, acute, some five or six inches in length, and a little more than an inch in breadth, dark green above, paler beneath. *Peduncle* one-flowered. *Flowers* three inches across; *dorsal sepal* broadly ovate, white flushed with flesh colour, having a broad central streak of rich bright brown, with a small patch of apple-green at the base—features that stamp it with the undoubted parentage of *C. Spicerianum*—and having on either side some thinner streaks of light magenta running up through it, but all ending below the margin, thus leaving a border of pure white; on the reverse side the streaks are of a deep magenta-purple; *lower sepal* smaller, creamy white, faintly streaked with pale green; *petals* linear-oblong, of a uniform width throughout, deflexed, the points recurved like *C. Fairrieanum*, ground colour soft apple-green, having a broad central stripe of chocolate and a few dotted lines of dark brown, margins beautifully undulated, broadly bordered with dark brown, and fringed with black hairs; the pouch-like *lip* medium size, pale green, flushed with bright brown in front, the veins green, passing into pale green beneath. *Staminode* sub-orbicular, deeply indented, streaked with green in the centre, having a lunate rosy border in front with a white margin.

Cypripedium Niobe, *Rolfe, in Gardeners' Chronicle*, January, 1890, p. 9.

Cypripedium Gaskellianum, *Gower, The Garden*, December, 1890, p. 150.

This rare and very beautiful hybrid Cypripedium has been obtained by crossing *C. Spicerianum* with *C. Fairrieanum*, and it flowered in the first instance from a seedling obtained in the nurseries of Messrs. Veitch and Sons, of Chelsea, in the early part of the year 1890. In the latter part of the same year we received a specimen from H. Gaskell, Esq., of Woolton Wood, Woolton, Liverpool, with the intimation that the history of the parentage of this seedling was lost; we wished to dedicate it to the raiser, and at that time having neither seen nor heard of *C. Niobe* of Messrs. Veitch, we were induced to call it *C. Gaskellianum*, but that name must now stand as a synonym only. From two such elegant species as *C. Spicerianum* and *C. Fairrieanum* for parents it was not unreasonable to expect a superb offspring, and here we have a plant which combines the beauties of the two parents in a marked degree. From the last named but few hybrids have been recorded, but the former, although of more recent introduction, has contributed largely to our cross-bred varieties. Our present plate was executed from Mr. Gaskell's specimen, so that we may congratulate him

on having raised so fine a variety of this now very large and highly popular genus. *C. Niobe* is somewhat stronger in growth than *C. Fairrieanum*, or at least stronger than that species has appeared to be of late years, but this want of strength may arise from its being unduly nursed for purposes of propagation, for in the earlier times the plant grew very freely with us, sending up stout peduncles some nine inches in height, but we have never seen it produce more than a single flower upon a stem. In those days the Cypripediums were not grown in a high temperature by us; with the exception of one or two, most of the kinds were grown in the temperature of the Cattleya house, in which heat *C. Fairrieanum* grew apace, therefore we cannot agree with those who ascribe want of strength to this species. The present plant will be found to be as strong in growth as *C. Fairrieanum* was before it was tampered with by the cultivators.

The present plant has distichous oblong leaves, some six inches in length, dark green on the upper side, but paler beneath; peduncle erect, bearing a single flower which is about three inches across; dorsal sepal large and handsome, broad and ovate, white tinged with flesh colour, having a small blotch of pale green at the base; in the centre is a broad line of chocolate, and having on either side a few streaks of magenta, which all terminate below the margin, leaving a marginal border of pure white; the lower sepal smaller, creamy white, with a few pale green veins; petals deflexed, the points recurved, ground colour pale green, with a broad central stripe of chocolate and two or three dotted lines on either side of dark brown, the margins undulated, bordered with dark brown and fringed with long black hairs; lip medium-sized, pale green, veined with a darker green, the front portion rich brown.

Cypripedium Niobe is a plant which thrives best in well-drained pots of a medium size, and should be potted in a mixture of fibrous light loam and turfy peat, adding a little leaf-mould and sphagnum moss. It enjoys the same temperature as the Cattleyas and Lælias, and should be well exposed to the sun and light, always remembering that the plants are under glass and liable to be burnt, so shade them lightly during the middle of the day.

Cattleya Schofieldiana.—Major Mason, The Firs, Warwick, sends us a fine flower of this rare and beautiful species; it is brighter in colour than any we have hitherto seen. Major Mason informs us that the plant from which this flower was taken had four spikes last year bearing in all sixteen flowers. Our readers will find full particulars of this plant in the second volume of this work, under Plate 93.—H. W.

PL.439

ONCIDIUM LOXENSE.

[Plate 439.]

Native of Ecuador.

Epiphytal. *Pseudobulbs* somewhat pyriform, slightly compressed, smooth when young, becoming furrowed with age, some three inches in length, and pale green, producing numerous long and thick aerial roots. *Leaves* ligulate, acute, thick and leathery in texture, deep green. *Scape* branching, some nine or ten feet long, bearing many flowers, which are very gay and showy. *Flowers* from two to three inches across; *sepals* and *petals* nearly equal, ovate, cuneate at the base, ground colour of the sepals pale greenish yellow, broadly streaked transversly with chocolate, petals wholly dark chocolate, saving the extreme tips, which are yellow, they also have a narrow marginal border of yellow; *lip* large, sub-rotund, with a somewhat hastate base, hollowed out in front, rich orange-yellow, spotted with some short lines of red on the narrow isthmus, and having two short spreading arms near the base.

Oncidium loxense, *Lindley, in Paxton's Flower Garden*, ii.. p. 128.

This rare and beautiful species was named and described by Lindley many years ago, but he had then seen only dried flowers. It long defied the efforts of collectors to introduce it in a living state; a few years ago, however, this was achieved by the skill and perseverance of M. Klaboch, when collecting for Mr. Sander, of St. Albans. The plant is found in Ecuador, in the neighbourhood of Loja (Loxa), which lies in the *templadas* or temperate region, and extends from about 6,000 to 9,000 feet above the sea level. It is a rare beauty, rivalling even *Oncidium macranthum* in its showiness, and yet it does not belong to the same section (*microchila*). *O. macranthum* and the rest of that group are dependent for their beauty upon the display made by their enlarged sepals and petals, but the lip is small, and in the species we have now under consideration the sepals and petals are both large and showy, and the lip itself is very large and beautifully coloured, so that it is quite distinct from any of that group. We have seen it flowering in several collections during the present season, notably with J. Ingram, Esq., Elstead House, Godalming—Mr. Bond, his gardener, being awarded a First Class Certificate for it at the Temple Show of the Royal Horticultural Society—and in Mr. Sander's group at the same exhibition, but the plant from which our figure was taken flowered in the collection of the late G. Neville Wyatt, Esq., Lake House, Cheltenham, in the early summer of 1890, and it is a magnificent form of the plant.

Oncidium loxense is an evergreen plant. The pseudobulbs are pear-shaped, smooth when young, becoming wrinkled with age, and bearing mostly but a single leaf, which

is obtusely ligulate, carinate beneath, and unequally bi-lobed at the apex. The long branching flower spike bears numerous, very beautiful and showy flowers, thick and coriaceous in texture, which last a long time in full perfection. The sepals and petals are large, measuring nearly three inches across; these are somewhat ovate, deep chocolate-brown in colour, the sepals transversly barred with brown on a greenish yellow ground; lip large, sub-rotund, rich orange-yellow, dotted with lines of red at the base.

The plant in question, coming from so great an altitude, naturally thrives best under cultivation in the cool house with the Odontoglossums. We are told that in Quito the rain is abundant, falling generally for a few hours in the afternoon, and rarely so constant or so heavy as to mar seriously the enjoyment derived from the usually bright sky and delicious atmosphere. Further south in Loja, and east in the plains, there is less than at Quito, while in the opposite direction at Barbacoas, it rains nearly every day in the year; but although in Loja there is less rain than at Quito, enough always falls to keep the plants in a growing state, so that no season of rest need be given this plant, although less water will be necessary in the winter months. The pots should be well drained, and for soil use good peat fibre and sphagnum moss, using some medium-sized nodules of charcoal to keep the soil open and to carry off any excess of moisture, and the plant should be slightly elevated above the pot's rim in order to carry the damp away quickly from the young growth.

ANGRAECUM CHAILLIANUM

ANGRÆCUM CHAILLUANUM.

[Plate 440.]

Native of Western Africa.

Epiphytal. *Stem* erect, terete, some six inches or a foot high, bearing ligulate, distichous, imbricating leaves, which are linear-oblong, some six or eight inches in length, by an inch and a half in breadth, unequally two-lobed at the apex, undulated at the margins, leathery in texture, and rich deep green. *Racemes* drooping, about a foot long, many-flowered. *Flowers* of the purest white; *bracts* ovate-acuminate, brown; *sepals* and *petals*, together with the *lip*, all similar, the lateral sepals, however, are somewhat arcuate at the base. *Spur* slender, flexuose, some six inches long, yellowish white, with a greenish tinge. *Column* short and stout, the rostellum and anther case both produced into an obtuse beak.

Angræcum Chailluanum, *Hooker fils*, *Botanical Magazine*, t. 5589; *Williams' Orchid-Grower's Manual*, 6th ed., p. 115.

Angræcum arcuatum, *Lindley MSS. in the Hookerian Herbarium.*

The plant we have now under consideration is a very beautiful species, and one that has much improved under the cultivators' hands; it was originally sent home to the Royal Gardens at Kew, by the celebrated traveller M. Du Chaillu, on his return from his courageous journey into the wilds of Western Africa, upon which occasion he made known the discovery of the savage Gorilla in the Gaboon district. Some plants of the same species had also been sent to Kew, from the Nun River, by Herr Gustav Mann, and the dried specimens had been named by Dr. Lindley in the *Hookerian Herbarium, Angræcum arcuatum*, but from this South African species the plant from the west is abundantly distinct, and this plant was named by Hooker *fils*, in compliment to M. Du Chaillu, in 1866, when the plant first flowered in this country. For the pleasure of adding such a fine figure to the pages of the Album we are indebted to the kindness of F. G. Tautz, Esq., the plant having flowered with him when his collection was intact and he still occupied the well-known Studley House at Shepherd's Bush, where our artist made this very excellent sketch. It is a stout-growing epiphytal plant, having two-ranked imbricating leaves, which are unequally bi-lobed at the apex, undulated at the margins, leathery in texture, and rich deep green in colour. The raceme is drooping, as long or longer than the leaves, bearing numerous flowers which are pure white; the segments are about equal, narrowly lanceolate, recurved, its very long spur being tinged with pale yellowish green. This species, being a native of one of the hottest and wettest parts of the world, consequently requires to be

kept in the warmest house throughout the entire season, where the lowest temperature does not fall below about 65° at night. It enjoys an abundance of sun and light, but yet a thin shading material should be used to break the direct influence of the sun's rays during the middle of the day, and to avoid the effects of burning the leaves or to prevent them turning yellow, both of which have a bad effect upon the plant. A moist atmosphere must be maintained during the summer months, which is its growing season, and a more moderate amount of moisture in the air in winter will meet all requirements. The plant may be grown in a well-drained pot or in a hanging basket, the latter being preferable, as in this case the plant can be hung up near the roof-glass, and thus be better exposed to the full influence of the light; but it must be remembered that the plants are under glass, and that if exposed too much, the sun's rays may prove injurious to them, as before remarked. The pots or baskets in which they are grown should be well drained, and above this material sphagnum moss should alone be used; this should be cleanly picked and made firm, and at the same time should any decay in this material set in, it must be replaced at once by good fresh living moss, nothing dead, decaying, or sour being allowed to remain in contact with plant or roots.

J. Nugent Fitch del. et lith.

DENDROBIUM CRYSTALLINUM.

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DENDROBIUM CRYSTALLINUM.

[Plate 441.]

Native of Burmah.

Epiphytal. *Stems* tufted, terete, inclining to be pendulous and slightly flexuose, from a foot to eighteen inches in length, furnished with numerous semi-transparent sheaths. *Leaves* distichous, linear-lanceolate, acuminate, from four to six inches in length, pale green in colour, and deciduous. *Flowers* some two inches across, mostly in pairs, but sometimes three are developed, on short, slender peduncles, issuing from the upper nodes; *sepals* and *petals* spreading, white, tipped with rose, in some varieties this becomes of a pale rose, and in others the apical blotch in the sepals is wanting; *petals* obovate, much broader than the linear-oblong sepals, white, with a broad blotch of rose at the apex; *lip* nearly circular in front, the side lobes forming a convolute claw, the surface of the circular front lobe being furred and of a rich golden yellow, tipped with rosy magenta and having a marginal border of white. *Column* very short.

Dendrobium crystallinum, *Reichenbach fil*, in *Gardeners' Chronicle*, 1868, p. 572; *Xenia Orchidacea*, ii., p. 210, t 193.; *Botanical Magazine*, t. 6319; *Williams' Orchid Grower's Manual*, p. 277.

This plant is a native of the Arracan Mountains in Burmah, a country which appears to abound in species and varieties of the genus *Dendrobium*. It was found by Colonel Benson, we are told, growing upon small trees in exposed places, *D. Bensoniæ* being frequently found growing upon the same trees with it. The plant was first sent to Messrs. James Veitch and Sons, of Chelsea, by Colonel Benson, about twenty-four years ago, and in their establishment it first flowered in the spring of 1868. *Dendrobium crystallinum*, growing as it does freely and well under cultivation, and being found in the company of *D. Bensoniæ*, which is a reputed bad grower, some idea may be formed as to the requirements of that plant, to enable us to lead this, one of the finest of the white-flowered Dendrobes, to become a permanent resident in our collections. Beautiful as is any form of *D. crystallinum*, the variety here figured is a much finer one than that figured in the *Botanical Magazine*, t. 6319. The plant from which our plate was taken was grown by Mr. Godfrey, in the choice collection of Major-General Berkeley, Bitterne, Southampton, where it flowered in the early part of the present season.

Dendrobium crystallinum is a deciduous plant, but its young growth comes up at the time of flowering, so that the plant is not entirely devoid of leaves when this event takes place. During the growing season the plant should be kept in the East Indian house, but when the growths are finished up, less water is necessary than

during the period of active life, and at the same time the plant should be removed to a cooler temperature, with an abundance of air, sun and light; here it may remain until all the leaves have fallen, and should then be kept cool and dry through the winter months. When spring returns a little more heat and moisture may be given with advantage, which will start the young growths and the flower buds into activity. The plant is best grown upon a block of wood or in a hanging basket, in good brown peat fibre and chopped sphagnum moss, but it does not require a great quantity of soil about its roots.

Specimen Orchids at Gouville, France.—When recently on a visit to the collection of Orchids owned by M. le Comte de Germiny, we were much astonished to see the fine specimens of Orchids that exist in this collection. At the time of our visit we noticed *Cœlogyne barbata* with twenty-three expanded spikes of flowers, a quantity quite unprecedented, we believe; the plant, when grown to such perfection, is one of the finest objects imaginable. *Cattleya Bowringiana* was also blooming with twenty-six spikes, and formed quite a floral display by itself. Large quantities of fine plants of *Odontoglossum Pescatorei* were throwing up their spikes. We noticed a magnificent specimen of *Cymbidium eburneum* showing twenty of its spikes, which looked the picture of health. Specimens of *Angræcum sesquipedale* were also promising well for flower, as well as *Aërides Lawrenceæ* and other East Indian plants. We were much pleased to see an old friend, *Odontoglossum nævium majus*, represented by two fine specimens, one having upwards of fifty bulbs; it is very rarely one meets with good plants of this old and much neglected species now-a-days. The collection at Gouville is in excellent condition, and does great credit to Mr. P. Vincent, the able gardener.

H. W.

J.Nugent Fitch del.et lith.

CŒLOGYNE LENTIGINOSA.

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CŒLOGYNE LENTIGINOSA.

[Plate 442.]

Native of Burmah.

Epiphytal. *Pseudobulbs* situated upon a stout, creeping rhizome, somewhat distant, more or less obtusely four-angled, about three inches long, and deep green, sheathed at the base, with brown, ovate bracts. *Leaves* in pairs from the top of the pseudobulbs; these are oblong-lanceolate, acute, mostly petiolate, keeled beneath, and rich bright green. *Raceme* springing from the base of the pseudo bulb, erect, usually bearing four or five flowers, which are about an inch and-a-half across. *Sepals* and *petals* nearly equal, linear-lanceolate, acuminate, keeled behind, rich straw-yellow in colour; *lip* three-lobed, side lobes rounded, white, bordered with deep brown and spotted with a lighter shade of the same colour; middle lobe broadly clawed behind, trowel-shaped in front, with an acuminate, recurved point, and a crisp, undulated margin, having a broad blotch of orange-brown in the middle and a marginal border of white, the disc with three slender raised plates, the middle one much the shortest, and each ornamented with numerous rounded teeth.

Cœlogyne lentiginosa, *Lindley, Folia Orchidacea*, p. 146; *Botanical Magazine*, t. 5958; *Reichenbach fil, in Transactions of the Linnean Society*, xxx., p. 3; *Art. Cœlogyne.*

The plant here figured is not a new introduction, it having been introduced by Messrs. Veitch and Sons some forty-five years ago, when it was described by Lindley from dried flowers which were received from Thomas Lobb, who found it in the neighbourhood of Moulmein, and from which the learned Doctor assigned it to the Flaccidæ section of *Cœlogyne*, but it truly belongs to the section having erect peduncles. The variety flowered by Messrs. Veitch in the autumn of 1871, however, was a far less pleasing form than the plant here portrayed, having the sepals and petals of a pale yellowish green, whilst in the best variety they are of a rich deep straw-yellow. Our present drawing was taken from a plant which flowered in the month of February, 1891, in the pleasant garden of A. H. Smee, Esq., The Grange, Carshalton, where many gems are congregated under the care of Mr. Cummings, his gardener.

The plant now under consideration cannot be classed amongst the first-rate beauties in the Orchid family. It is, however, a very distinct plant and a highly desirable one, being a neat grower, its bright green bulbs and leaves rendering it always cheerful, whilst the yellow sepals and petals of the flowers, together with the white and orange of the lip, are a pleasing contrast. The form having green sepals and petals is much inferior, and it was this, perhaps,

which kept the species from receiving the attention from growers which a plant of this form here figured really deserves. It is an evergreen, and the colour of its pseudobulbs and leaves is a lively green. It may be grown either in a hanging basket, or in a pot or pan; but in whichever it is planted, the drainage should be kept in thoroughly open order, using for soil good brown peat fibre, from which all the finer particles have been shaken, and with this a fair proportion of chopped sphagnum moss, the whole to be well mixed and pressed down firmly, leaving the plant a little elevated above the pot's rim. It should be grown in the East Indian house, having a fair share of sun and light and a plentiful supply of water to its roots as well as in the atmosphere, but in the winter season much less will be necessary.

Lælia autumnalis alba.—There is now (December) flowering in the Victoria and Paradise Nurseries, Upper Holloway, a fine plant of this novelty, the first out of an importation received by us from Mexico. The flowers of this variety are pure white, and are quite as large as the type. This should form a pleasing companion to the coloured varieties of this old favourite. We also saw this variety last season flowering in the garden of G. C. Raphael, Esq., Castle Hill, Englefield Green, under the care of Mr. Swan.

H. W.

J. Nugent Fitch del. et lith.

LÆLIA EXONIENSIS.

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LÆLIA EXONIENSIS.

[Plate 443.]

Garden Hybrid.

Epiphytal. *Pseudobulbs* erect, stout, club-shaped, smooth when young, enveloped in large membraneous sheaths, but becoming somewhat thin and wrinkled with age, bearing on the apex a single leaf, which is from nine inches to a foot long, oblong-ligulate, obtuse, thick and leathery in texture, and rich deep green. The *scape* springs from an erect, stout, oblong sheath, and the raceme bears from four to five richly-coloured flowers, which measure from five to six inches across. *Sepals* lanceolate, plane at the edges, with recurved tips; *petals* much broader than the sepals, oblong-ovate, acute, the edges much undulated and frilled, and as well as the sepals white, flushed with a soft delicate tinge of flesh colour; *lip* three-lobed, the side lobes erect, rolled over the column, the middle lobe expanded, beautifully frilled and undulated, white externally, as also are the side lobes, slightly flushed with rose, the whole surface of the anterior lobe inside being of an intense shade of deep rich purple, having a marginal border of white, the throat yellow, streaked with purple.

Lælia exoniensis, *Veitch's Manual of Orchidaceous Plants*, Part ii., p. 95.

Cattleya exoniensis, *Reichenbach fil, Gardeners' Chronicle*, 1867, p. 1144; *Warner's Select Orchidaceous Plants*, ii., t. 36.

This plant is a hybrid, raised by our old friend, the late Mr. Dominy, in the Exeter nurseries of Messrs. James Veitch and Sons, now of Chelsea; it was one of his earliest efforts, and by the great majority of Orchid growers it is still held to have been one of his best achievements. Owing to some laxity in keeping the records of the crosses in the early days of Orchid hybridisation there is some doubt respecting its parentage, and the doubt has not been satisfactorily cleared up to this day. It is usually said to be a cross between *Cattleya Mossiæ* and *Lælia purpurata*, but there is little in the plant to suggest *C. Mossiæ* being one of its parents. The other supposition, and one in which we ourselves concur, is that *L. crispa* and *L. purpurata* are responsible for this rare beauty. The very finest example which we ever saw of this plant was in the excellent collection brought together by the late Mr. Dawson, of Meadow Bank, Uddingstone, N.B., and so admirably managed by his gardener, Mr. Anderson. It was a variety very similar to the one here portrayed, and the fine plant had sixty of its gorgeous flowers fully developed at the same time, which was a sight we think worthy of notice, and is very rarely equalled.

We are indebted to the liberality of G. F. Tautz, Esq., for the opportunity of laying a portrait of this fine plant before our subscribers, the plant from which

our drawing was taken being one of his especial favourites. It was well grown and bloomed by his gardener, Mr. Cowley, when in charge of the celebrated collection at Studley House, Shepherd's Bush, and we trust to soon hear from him again in his new residence.

Lælia exoniensis is a robust-growing variety, having clavate pseudobulbs, which bear a large solitary leaf of a bright deep green; the richly-coloured flowers are produced during the autumn months, and they last in full beauty for a very long time. The greatest failing in preserving Cattleya flowers is brought about by too low a temperature and too great a quantity of moisture in the air; when treated in this manner the flowers become covered with black spots and are thus rendered unsightly. It grows quite well in the Brazilian house with the other species and varieties of Cattleyas and Lælias.

J. Nugent Fitch del. et lith.

DENDROBIUM ATRO-VIOLACEUM.

B. S. Williams & Son. Publrs

DENDROBIUM ATRO-VIOLACEUM.

[Plate 444.]

Native of Eastern New Guinea.

Epiphytal. *Pseudobulbs* clavate, furrowed, attenuated below, where it is terete, upwards of a foot long. *Leaves* two and three on the apex of the pseudobulb, these are oblong-ovate, thick and leathery in texture, dark green. *Raceme* terminal, bearing in this instance probably an imperfect quantity of flowers, being only five in number, and these being about two-and-a-half inches across. *Sepals* ovate-lanceolate; *petals* broader, obovate, acute, all fleshy in texture, ivory-white, and all more or less spotted with deep purple on the inside, but the spots on the outside are duller in hue; *lip* three-lobed, side lobes large, erect, incurved and rounded, rich violet-purple within, but green without, anterior lobe ovate, with incurved margins, rich violet-purple on the inside, narrowly bordered with green, disc having a fleshy keel, which towards the base becomes divided. *Column* short, white, tinged with deep purple in front.

Dendrobium atro-violaceum, ***R. A. Rolfe***, *Gardeners' Chronicle*, 1890, third series, vii., p. 512.

This distinct and handsome species would appear to have only arrived home from New Guinea some two years ago, and we believe the plant here figured to be the only one that has flowered in this country. For this very beautiful species we are indebted to Messrs. James Veitch and Sons, of Chelsea, who obtained it from the Eastern part of the famous island of New Guinea, a country which appears to abound in new and wonderful forms of plant life. It belongs to the same group as *Dendrobium macrophyllum*, of Achille Richard, but this plant has not reached us in a living state. The variety *D. Veitchianum*, however, is well-known; it is a native of very hot jungles in the island of Java, and the plant evidently comes from a very hot and moist place. The species now under consideration is a far handsomer kind than any of the same group at present known, and we have no doubt there are many new and charming forms of the same genus yet to come from New Guinea. For the opportunity of figuring this beautiful and rare plant we are indebted to the kindness of Mrs. Studd, Royal Crescent, Bath, in whose collection it flowered in the spring of the present year (1891), but since then the place has been denuded of Orchids, where many splendid varieties existed, and where the plants were well done under the care of Mr. G. Cypher.

Dendrobium atro-violaceum is a robust and noble-growing plant, with persistent leaves, but it has not been in this country long enough to establish itself and display its beauty in the fullest degree. The pseudobulbs are clavate, tapering downwards,

where they become terete; they are furrowed, and have near the top two or three somewhat stout leathery leaves. The flower spike or scape is sub-terminal, erect, and the flowers large and nodding, the pedicels white, and the sepals and petals thick and fleshy in texture, ivory-white, or a creamy white ground colour, the petals especially being spotted with deep purple, the inside fainter in colour; the lip is of an intense deep violet-purple, the front lobe having a narrow marginal border of green.

This plant grows naturally in a hot moist atmosphere, and one would imagine from the size of its pseudobulbs that it was endowed with the means of withstanding a severe dry season; but this does not appear to be the case, for the moisture which arises, even in the dry season, enables this plant to bring its leaves and bulbs through without much injury. It should be potted or planted in baskets, and hung up near to the roof-glass in order to allow all the sun and light possible to get at it; but yet a thin shading should be available during the very hottest part of the day in the summer. It should be well drained, potted in good peat fibre and sphagnum moss, and the plant grown in the stove with Crotons and such-like plants, which require great exposure to sun and light, or in the hottest part of the East Indian house, the atmosphere in either position being kept well charged with moisture. In the winter, although much less water will be necessary, it must not be allowed to suffer from drought.

CYPRIPEDIUM INSIGNE MOOREANUM.

[Plate 445.]

Native of India.

Epiphytal. *Leaves* distichous, linear-ligulate, acute, channelled above, keeled beneath, sheathing at the base, coriaceous in texture, plane, green on both sides, saving a few purplish black blotches on the under side near the base. *Scape* erect, usually one-flowered. *Bract* boat-shaped, slightly compressed, as long as the ovary. *Flowers* large, measuring upwards of five inches across, beautifully showy; *dorsal sepal* broadly ovate, slightly waved at the margin, the apex fomicate, the central area pale green, heavily spotted with pale purple, leaving a broad marginal border of the purest white; *lower sepal* remarkable for its great size, oblong-ovate, acute, cream colour, with a few small spots mostly on the veins; *petals* spreading at right angles, linear-obovate, the margins being creamy white and undulated, the central portion greenish yellow veined and netted with reddish brown, and having a few scattered spots of the same colour towards the base; the saccate *lip* with spreading mouth, rosy brown in front, paler beneath. *Staminode* obcordate, pubescent, yellow, having a central deep orange-coloured point.

Cypripedium insigne Mooreanum, *Williams' New Plant Catalogue*, 1887, p. 22.

The typical *Cypripedium insigne* was the second species of the coriaceous-leaved section of the genus discovered by Wallich in Sylhet, and introduced to cultivation slightly over seventy years ago. We have been greatly pleased with the numerous beautiful forms of this plant which have appeared from recent importations. In the early days of Orchid culture, varieties were not so much noted, but since the love for Cypripediums has become world-wide, the plant has been imported from many localities, and new varieties have appeared in abundance, *C. insigne Sanderæ* being perhaps the most chaste and valuable form which has yet appeared. *C. insigne aureum*, *C. albo-marginatum*, and of the older forms, *C. punctatum violaceum* and *C. Maulei*, are all magnificent examples of the beauties which are to be found in the old *C. insigne*. Among the many varieties which have received notice, the subject of our present illustration stands out prominently conspicuous for the brilliancy of its dorsal sepal, as well as for the size of the lower sepal. This variety originated in our establishment, and it was named by the late Mr. B. S. Williams in honour of Thomas Moore, then the able Curator of the Apothecaries' Garden at Chelsea. The plate was taken from the original plant, and it is a true and faithful copy, and we have a great deal of pleasure in laying it before our subscribers.

Cypripedium insigne ***Mooreanum*** does not differ in the slightest degree from the robust habit of the typical plant, except that the flower spikes are longer than in the type, growing well and flowering under most different treatment, and in soils of the most opposite nature; thus, we recently saw a fine plant of *C. insigne*, bearing between twenty to thirty flowers, growing as a window plant at the residence of an enthusiastic amateur, some few miles distant from London. It was potted in peat, good garden mould of a somewhat leafy nature, sand, and a small portion of bone dust added to the whole. The plant was in excellent health, and had occupied the position about three years, this being the second year of its flowering. In the same neighbourhood, we saw a plant in a similar condition growing in a gentleman's stove house, and which was also blooming in great profusion, bearing some thirty-three flowers. This plant was potted in fibrous peat and light turfy loam and sphagnum moss, some small-sized nodules of charcoal being inserted at the time of potting. These plants, treated in quite a different manner, were equally beautiful, and gave their possessors equal pleasure; in both cases, however, the drainage was perfect, and the plants were kept scrupulously clean.

Awards made by the Orchid Committee of the Royal Horticultural Society, for the Third Quarter in the Year, 1891.

July 21st. *First Class Certificate* to Hamar Bass, Esq., Byrkley, for *Cattleya Hardyana, Bass's var.* The flower was very large, sepals and petals broad, and deep rosy lilac, the lip deep purple, having the throat orange-yellow, streaked with deep rich purple.

Botanical Certificate to Messrs. B. S. Williams and Son for *Cochlioda Noetzliana*, flowers deep orange-vermilion coloured.

August 11th. *First Class Certificate* to Messrs. Veitch and Sons, Chelsea, for *Cypripedium macrochilum*, a cross between *C. longifolium* and *Uropedium Lindenii*, a curious hybrid, having the general appearance of *C. Wallisii*, but with a very much larger lip.

First Class Certificate to Messrs. Veitch and Sons for *Cypripedium Corningianum*, a hybrid between *C. superbiens* and *C. philippinense*, having somewhat the appearance of *C. Morganiæ*, but smaller, the petals much spotted.

Award of Merit to Thomas Statter, Esq., Rawtenstall, for *Dendrobium Statterianum*, a supposed hybrid between *D. crystallinum* and *D. Bensoniæ*; and the same award to Messrs. Seeger and Tropp, Dulwich, for *Cattleya Gaskelliana speciosa*, sepals and petals pure white, lip white, having a bright crimson blotch on the front lobe, which is bordered with white, throat rich yellow.

Botanical Certificate to Messrs. Charlesworth, Shuttleworth and Co., Bradford and Clapham, for *Odontoglossum Hinnisii*, a very pretty species with yellow and brown flowers.

(*Continued under Plate* 446.)

ODONTOGLOSSUM

CHYSIS BRACTESCENS.

[Plate 446.]

Native of Mexico.

Epiphytal. *Pseudobulbs* stem-like, fusiform, thick and fleshy in texture, from six inches to a foot in length, bearing towards the apex several ovate-lanceolate plaited leaves, which are deciduous, thin, and sheathing at the base, and bright light green in colour. *Scape* rising with the young growth, three to eight flowered, the individual blooms some three inches across, having a leafy bract at the base. *Sepals* slightly incurved, oblong, thick and waxy; *petals* similar to the sepals, also slightly incurved, obovate-oblong, all of the purest white; *lip* three-lobed, side lobes erect, incurved, white like the other parts of the flower on the outside, yellow within, having a few streaks of red at the sides; middle lobe fleshy, somewhat four-sided, bilobed in front, yellow, flushed and lined with red, having at the base five raised fleshy ridges. *Column* broad and fleshy, boat-shaped, the upper part white, yellow beneath.

Chysis bractescens, *Lindl.*, *Botanical Register*, 1840, *misc.* 131. *Id.*, *Botanical Register*, 1841, t. 23. *Botanical Magazine*, *t.* 5186. *Bateman's 2nd Century of Orchids*, t. 138. *Reichenbachia*, i., t. 18. *Flore des Serres*, vii., t. 675. *Revue Horticole*, 1859, t. 294. *Illustration Horticole*, 2nd series, t. 398. *Williams' Orchid Grower's Manual*, 6th ed., p. 210.

We have in this plant a beautiful free-flowering species, which was introduced to cultivation by Mr. Barker, of Birmingham, who grew it and first flowered it just fifty-two years ago, since which time it has always remained a popular plant. During the past few years, Messrs. Veitch and Sons have added two hybrids to the somewhat limited number of species which comprised this genus, and which have done much to raise and increase interest in them. The plant from which our drawing was made, flowered in our establishment in the spring of last year, during which time we had a goodly number flowering, and the blooms lasted a long time in full beauty.

Chysis bractescens is a deciduous plant, casting its leaves after the growth is completed, requiring at this time to be kept at the cool end of the Cattleya house, and giving it just sufficient water to keep the bulbs from shrivelling. In the spring of the year the plants should be re-potted if grown in pots, but we prefer to grow them in baskets, which is more in accordance with their natural conditions, where they grow upon the branches of forest trees, and consequently have some shade during their growing season. After potting or basketing, as the case may be, they should be removed to the East Indian house. The plants grow low down in Mexico, in the province of Vera Cruz and the province of Tabasco, where they

are found growing wild, and as these places are said to be very hot, therefore, while the growth is forming, we like to place them where they can have the greatest amount of heat. After growth is completed they like a decided rest; this can be the more easily given them by reducing the temperature, and withholding water. The flowers of all the species of Chysis are showy, with the exception of one *C. aurea*, the species upon which Lindley founded the genus, which arises from the fact that the blooms are self-fertilising, and they consequently never display their beauties.

AWARDS MADE BY THE ORCHID COMMITTEE *(concluded from under Plate* 445*)*.

Cultural Commendation to C. J. Lucas, Esq., Horsham, for *Angræcum Ellisii*, bearing a spike with twenty one flowers.

Special Vote of Thanks to Mr. Owen Thomas, gardener to His Grace the Duke of Devonshire, Chatsworth, for a group of *Disa grandiflora*.

AUGUST 25th. *Botanical Certificate* to Messrs. Charlesworth, Shuttleworth and Co., for *Zygopetalum (Batemania) grandiflorum*, the sepals and petals being green, streaked with a deep rich brown, and a white lip.

Cultural Commendation to Mr. J. Douglas, gardener to Mrs. Whitbourne, Ilford, for *Cypripedium Lowianum*, a spike bearing six flowers.

Award of Merit to T. Statter, Esq., Rawstenstall, for *Lælia elegans blenheimensis*. To Mr. F. Sander, for *Cattleya Behrensiana*, a cross between *Lælia elegans* and *Cattleya Loddigesii*; the flowers large, with the sepals and petals white, tinged with flesh colour, lip broad and flat, of a rich deep rosy crimson. To Messrs. Seeger and Tropp, Dulwich, for the pure white *Sobralia leucoxantha*.

SEPTEMBER 8th. *First Class Certificate* to Baron Schröder, The Dell, for *Miltonia Bluntii Lubbersiana*, a superb variety, bearing two racemes of large flowers; sepals and petals white, suffused with rosy lilac, lip large and flat, light purple in ront, passing into white at the base, having a streak of purple on each side of the crest.

Cultural Commendation to C. J. Lucas, Esq., for *Angræcum articulatum*.

Botanical Certificate to Messrs. Sander and Co., St. Albans, for *Cattleya granulosa Dejanceana*, with flowers smaller than those of the species; sepals and petals green, the three-lobed lip having the lateral lobes white, the middle lobe being rose colour, much reduced. To Messrs. Hugh Low and Co., for *Mormodes buccinator aurea*, with rich yellow flowers, and for *Catasetum fimbriatum*. To W. Wright, Esq., Denmark Hill, for *Catasetum fimbriatum*, male and female flowers.

SEPTEMBER 22nd. *First Class Certificate* to Baron Schröder for *Cypripedium Antigone*, a cross between *C. niveum* and *C. Lawrenceanum*; flowers white, suffused with a rosy tinge, as large as the last named parent. To Thomas Statter, Esq., Rawtenstall, for *Cattleya intermedia alba*, a pure white form, which, if we are not mistaken, Reichenbach named *Parthenia*.

CYPRIPEDIUM VEXILLARIUM.

[Plate 447.]

Garden Hybrid.

Epiphytal, ebulbous. *Leaves* distichous, oblong-acute, carinate beneath, some four inches or five inches in length, and about three-quarters of an inch in breadth, soft pale green, tesselated somewhat sparingly on the upper side with darker green. *Scape* terminal, erect, deep vinous purple, hirsute, one-flowered, the bract being about two-thirds the length of the ovary. *Flowers* large and brilliantly coloured, *dorsal sepal* broadly ovate, tinged with emerald green at the base, the surface suffused with bright light purple, the upright veins being of a deep vinous purple, whilst the cross veins are of a lighter shade of the same colour; the upper part of the sepal is pure white, which is continued round in a marginal border; *lower sepal* whitish, faintly tinged and veined with pale green; *petals* deflexed, slightly recurved at the tips, ligulate acute, undulate and ciliate at the margins, the basal half suffused with bright emerald-green, but towards the apex they become whiter and suffused with light purple, the veins being green, dotted with black towards the base; the pouch-like *lip* is soft reddish brown, veined with vinous purple, paler beneath. *Staminode* pale greenish brown, with a lighter margin.

Cypripedium vexillarium, *Reichb. fil.*, *Gardeners' Chronicle*, 1870. *Veitch's Catalogue*, 1879, p. 10. *Florist and Pomologist*, 1880, p. 13. *Veitch's Manual of Orchidaceous Plants*, iv., p. 100, with fig. *Williams' Orchid Grower's Manual*, 6th edition, p. 260.

This most beautiful hybrid is the result of a cross between *Cypripedium barbatum* and *C. Fairieanum*, and in the example from which our plate was taken the variety of *C. barbatum* must, we think, have been of a very fine description. The hybrid was obtained in the first place by the late Mr. Dominy, at the establishment of Messrs. Veitch & Sons, of Chelsea, and although one of the early hybrids, from its charming and brilliant colours and its general contour it must always take a foremost place amongst Slipper Orchids. The plant until quite recently has been rather scarce and difficult to obtain, through being somewhat slow in growth, but we have not found this to be the case, and, in consequence, we now hold a very nice stock of this exceedingly handsome plant. The specimen from which our illustration was taken flowered with us in the Victoria and Paradise Nurseries during the past summer, which was not a season remarkable for either great heat or brightness in the atmosphere, two of the chief elements in the development of good colour.

Cypripedium vexillarium is a small-growing plant, indeed, it is remarkable for

its dwarf habit, the leaves seldom exceeding four or five inches in length, and measuring considerably less than an inch in breadth, the ground colour on the upper side being pale green tesselated with darker markings, while beneath they are soft pale green; the erect scape is hirsute, and of a deep purplish brown. The flower is of good size and charmingly coloured and reticulated, the dorsal sepal being broadly ovate, white, tinged with soft light green at the base, suffused with bright light purple, and veined with rich vinous purple; the upper part and the margins of the sepal are bordered with pure white, the lower sepal white tinged with pale green; petals deflexed and recurved something in the manner of its last-named parent, bright pale green, becoming whiter and suffused with light purple at the tips; the saccate lip is soft reddish brown.

Cypripedium vexillarium is an evergreen plant of exceptional beauty; it enjoys the temperature of the Cattleya house in the summer-time, but the East Indian house in winter suits it best, and a moist atmosphere all the year round. It should be potted in well-drained pots, and in a mixture of fibrous peat, from which the greater portion of the fine soil has been beaten, a little light turfy loam treated in the same manner as the peat, some chopped sphagnum moss, a small portion of sharp sand, and a few nodules of charcoal broken up fine. It requires a liberal supply of water to its roots during the summer months, and during the winter less must be given, but at no time must the roots be allowed to suffer for want of water.

DENDROBIUM INFUNDIBULUM.

[Plate 448.]

Native of Burmah.

Epiphytal. *Stems* slender, cylindric, furrowed, and from one to two feet in length. *Leaves* distichous, alternate, linear-lanceolate, sheathing at the base. *Peduncles* developed from the upper joints of the stem-like pseudobulbs, bearing from two to five flowers. *Flowers* from three inches to four inches across, of a very showy character; *sepals* plane, oblong-lanceolate, acute, the lateral ones produced behind into a long curved spur; *petals* very broad, obovate, all of the purest snow-white; *lip* three lobed, side lobes obtuse, folded over the column, with a smooth surface, the front lobe oblong, with a bilobed apex, undulate on the margin, white, with a blotch of colour between the side lobes, which varies from bright cinnabar to pale yellow.

Dendrobium infundibulum, *Lindley, in Journal of Linnean Society*, iii., p. 16. *Botanical Magazine*, t. 5446. *The Garden*, xxii., t. 368. *Illustration Horticole*, 1874, t. 192.

Dendrobium moulmeinense, *Hort. Low.*

This beautiful plant was sent from Moulmein to Messrs. Low and Co., of Clapton, about thirty years ago, by the Rev. C. Parish, then resident in Burmah, and it captivated with its beauty everyone who saw it blooming for the first time. The name of *Dendrobium moulmeinense* was given it by Messrs. Low, they being at the time under the impression that it was new; but although the Rev. C. Parish was the first one who sent living plants to this country, it had been previously found by Thomas Lobb, when collecting plants for Messrs. Veitch and Sons, of Chelsea, and from specimens sent home by him, it was named by Lindley some four years previous to its introduction in a living state, so that the name of *moulmeinense* had to give way to the one here adopted. This plant grows in the mountains of Moulmein, at from 1,600 to 6,500 feet elevation, upon deciduous trees, and sometimes upon rocks. At this altitude the temperature has a somewhat wide range, varying from about 38° or 40° up to 75° and 80°, and it has been found that in this country the plants thrive better under cool treatment than when subjected to greater heat. Only a few weeks ago we saw a vast quantity of this species growing and flowering in the establishment of Messrs. Low and Co., in quite a cool house, much better than others from the same importation which had been placed in warmer positions from the date of their arrival.

The plant named by Reichenbach, and figured in this work (vol. v., t. 221), as *Dendrobium Jamesianum*, in honour of the late Mr. James Veitch, then the head of the firm at Chelsea, is considered by many a variety only of this plant, but we think it is quite a distinct species. This idea is not based upon the colour of the lip, which varies much, as it does in all the members of the nigro-hirsute section of the genus, but we have always found the true *D. Jamesianum* has the inner side lobes of the lip rough and asperous, and the spur is straight, whilst in the present *D. infundibulum* the side lobes of the lip are quite smooth, and the spur is curved, so that we feel compelled to accept the dictum of Reichenbach.

The plant here figured is a very fine variety, and flowered in the fine and choice collection of Major-General Berkeley, at Bitterne, Southampton, which is under the able care of Mr. Godfrey, and we ourselves have scarcely been without blooms of it during the whole season. We grow it in the lightest part of the Odontoglossum house, at the warmest end, and have found that a moist atmosphere is essential to its welfare during the entire year, but more especially during the summer, its growing season. It may be grown in a pot or hanging basket, but the soil should be made firm about its roots, taking care not to overload the roots with soil, neither should too great an amount of pot room be allowed. The pots should be specially well drained, using as soil good brown fibrous peat, and about an equal part of chopped sphagnum moss, adding a few medium-sized nodules of charcoal. The plants should remain in the house in which they open, taking care to avoid wetting the flowers from the syringe, as we have observed that even the most delicate blooms last in beauty considerably longer when so treated.

J.Nugent Fitch Sel. et lith.

LÆLIO-CATTLEYA DIGBYANA MOSSIÆ.

B.S.Williams & Son Publrs

LÆLIO-CATTLEYA DIGBYANA-MOSSIÆ.

[Plate 449.]

Garden Hybrid.

Epiphytal. *Pseudobulbs* clustered, somewhat clavate, monophyllous. *Leaves* strap-shaped, some eight or nine inches long, coriaceous in texture, and deep green. *Scape* at present few-flowered, flowers large and showy, measuring upwards of six inches across. *Sepals* linear-lanceolate, plain at the edges; *petals* obtusely-oblong, much broader than the sepals, toothed at the edges, all being of a delicate soft rosy lilac; *lip* large, some three inches long, not flattened out as in the Brassavola, three-lobed, side lobes convolute over the column, the colour delicate rosy lilac, heavily fringed round the edge of the middle lobe, which is continuous along the side lobes also, the middle lobe having a somewhat bold streak of crimson-lake, and numerous minor splashes of the same colour in front. Between the rosy-lilac fringed border and the throat is a zone of white; the throat in front is deep yellow, marked with radiating streaks of richer yellow, the base profusely marked with minute dots of crimson-lake.

Lælio-Cattleya Digbyana-Mossiæ, *R. A. Rolfe*, *Gardeners' Chronicle*, 3rd series, vol. v., June, 1889, p. 742. *Id.*, p. 657, fig. iii.

This is one of the finest and most remarkable hybrids yet obtained in any garden, and was raised by Mr. Seden, in the establishment of Messrs. James Veitch and Sons, of Chelsea. It was exhibited by its raisers before the Royal Horticultural Society, in May, 1889, and was deservedly awarded a First Class Certificate. It is the result of a cross between *Cattleya Mossiæ* and *Brassavola Digbyana*, and it partakes of the beauties of both parents. We cannot but think, however, that its cumbrous name spoils the effect of its beauty; if the two generic, coupled with the two specific, names are requisite for this plant, what will be done when another plant, similarly begotten and similarly christened, comes before us? Our readers will be inclined to think with us, that the names become absurdly cumbrous and entangling, and certainly does not tend to simplify the difficult task of calling the plants we grow by a correct and elegant appellation. With its very ugly name, however, we have nothing to do in this place; we have enough to do to admire its loveliness, so we dismiss the former question without further comment. This plant passed from its raisers into the celebrated collection of Baron Schroeder, The Dell, Egham, which is so ably managed by his gardener, Mr. Ballantine; and by the kindness of Baron Schroeder, our artist was enabled to execute such an accurate plate for the Album as that now laid before our readers.

This beautiful novelty is now about ten years old, and has somewhat short pseudobulbs, which carry a single leaf; in this matter of shortness of pseudobulbs it partakes of the habit of its parent, the Brassavola, but its flowers are of good size. The leaves are between eight and nine inches long, of a rich green colour, and quite destitute of the glaucous hue of the Brassavola. The flowers as yet are few in number upon the scape, and measure about six inches across, but as the plant gains in strength the flowers will in all probability increase in size; the colour is a delicate soft rosy lilac, streaked and dotted with crimson-lake. Nothing can be said by us respecting the management of this variety, but we are told by Mr. Ballantine that he has not found it to differ from the warm Cattleyas in its requirements. It should be well drained, and potted in good brown peat-fibre, adding a small portion of chopped sphagnum moss; the plant, too, must be kept free from all insect pests, and all will be well.

Awards made by the Orchid Committee of the Royal Horticultural Society, for the Fourth Quarter in the Year 1891.

October 6th. A *First Class Certificate* to Baron Schroeder, for *Lælia Perrinii alba*, flowers large, measuring seven inches across, and the sepals and petals very broad; the whole of the flower of the purest white, saving a tinge of primrose yellow at the base of the front lobe of the lip. This, we think, had been previously named by Reichenbach, *Lælia Perrinii Parthenia*.

An *Award of Merit* was made to G. O. Sloper, Esq., Westrop House, Highworth, Wilts., for *Cattleya aurea marmorata*. The flowers were large, the sepals and petals being creamy white, sparingly spotted and marbled with rose; lip dark purplish crimson on the front lobe, side lobe and the throat rich yellow.

A *Cultural Commendation* was awarded to F. A. Bevan, Esq., for *Cypripedium Sanderianum*, bearing two spikes, each with three flowers, with its twisted petals some fifteen inches long. The plant had been well grown by the gardener, Mr. Phillips, but we have seen the petals longer, measuring about nineteen inches in length.

October 27th. An *Award of Merit* to Messrs. B. S. Williams and Son, for *Cypripedium Pitcherianum (Williams' variety)*, which is a very rich and highly-coloured form of the original; and the same award was given to Mr. C. Ingram, Elstead House, Godalming, for *Cypripedium radiosum*, which is a cross between *C. Lawrenceanum* and *C. Spicerianum*, raised by Mr. Seden, and flowered for the first time about seven years back.

A *Botanical Certificate* was awarded to Messrs. F. Sander and Co., St Albans, for *Dendrobium O'Brienianum*, which has long pendent sprays of greenish flowers, which are singular, but not showy.

(*Continued under Plate* 450.)

J. Nugent Fitch del. et lith .

B. S. Williams & Son Publ.rs

DENDROBIUM WARDIANUM ALBUM .

DENDROBIUM WARDIANUM ALBUM.

[Plate 450.]

Native of India.

Epiphytal. *Pseudobulbs* stem-like, terete, pendent, swollen at the nodes, from eighteen inches to two feet or more in length, and furnished with oblong-lanceolate acute leaves, which are about three or four inches long, bright shining green, and deciduous. *Flowers* usually in pairs, although three are sometimes produced on the raceme, each measuring from three to four inches across, thick and waxy in texture; *sepals* lanceolate, with blunt ends; *petals* oblong-ovate, much broader than the sepals, and all of the purest white; *lip* sub-orbicular, rolled over the column at the base, which is of a deep orange-yellow, the anterior part pure white.

Dendrobium Wardianum album, ***supra.***

The plant here figured is a remarkably handsome form, differing entirely from the variety known as *Dendrobium Wardianum candidum* in being quite destitute of the two velvety eye-like spots at the base of the lip. This plant, too, is more slender in its growth, and it has more the resemblance of the Assam plant than the Burmese one, the former being the typical plant, though some assert that the latter is the type, and the former a variety of it. The plant from Assam, however, flowered and was figured some twenty years before the late Mr. Stuart Low introduced the stout-growing kind from Burmah, which is called by some *Wardianum Lowii*, and by others *Wardianum giganteum.* By the latter name we have figured it in this work, Vol. iii., t. 113. Both forms produce magnificent flowers, but the Assam form would appear to bring forth flowers having richer and brighter colours, but somewhat smaller in size. The latter plant, however, is somewhat more difficult to manage in a satisfactory manner. The plant we now have under consideration flowered with W. R. Lee, Esq., Beech Lawn, Audenshaw, Manchester, in the spring of last year (1891), in whose garden are gathered together many choice and new species and varieties of Orchids, all of which are admirably managed by Mr. Billington, his gardener.

In the variety *candidum*, the flowers are similar in size to those of the plant here figured, the sepals and petals being of a pure waxy white, and the lip stained with orange at the base; it has in addition two velvety eye-like spots in the orange, which the variety *album* is quite without, neither is the latter plant so strong in its growth as the variety *candidum.*

Dendrobium Wardianum album is a compact-growing deciduous plant, of pendent habit, so that it is best grown in a hanging basket, well drained, using for soil about half-and-half good peat fibre and chopped sphagnum moss. During the growing season the temperature should be kept high, the atmosphere moist, and it also will require a good supply of water to the roots, and overhead from the syringe, When growth is finished it should be removed to a dry airy house, and kept without any water to the roots; this has the effect of maturing the bulbs, as it causes the leaves to ripen and fall off, and the bulbs being strong and plump, they do not suffer through being kept without water. Care must be taken, however, that this drying is not carried to excess, or they will shrivel up, and will not produce any flowers the following spring, or if the flowers are produced they will be of inferior quality; but if the plants are wintered cool and dry, the flowers will come away about the month of March in great perfection. Of course, when the flower-buds begin to appear, the plants require to be removed to a warmer and moister atmosphere, and to have water given to their roots occasionally.

AWARDS MADE BY THE ORCHID COMMITTEE (*continued from under Plate* 449).

NOVEMBER 10th. A *First Class Certificate* was awarded to Messrs. Veitch and Sons, Chelsea, for *Phaius maculatus grandifolius.* The leaves resembled *P. grandifolius*, sparingly spotted with yellow; the spike was some three feet in height, the flowers large and handsome, sepals and petals yellow, with a tinge of bronze, the lip yellow at the base, and, in front, reddish chestnut, lined with the same colour. The same Award was made to Baron Schroeder, The Dell, Egham, for *Cypripedium insigne Sanderæ*, which is a lovely flower, of a shining clear lemon, saving the upper part of the dorsal sepal, which is pure white. This is a charming plant, but is not unique, as has been stated. The same Award was conferred upon Messrs. F. Sander & Co., St. Albans, for *Dendrobium Leeanum*, a plant that came home with the large importation of *D. Phalænopsis* from New Guinea, from which it is quite distinct, having slightly compressed pseudobulbs, the flowers large and showy, sepals white, flushed with dark rose, the petals much broader, deep rosy crimson, lip rich rosy crimson in front, pale green at the base.

DECEMBER 8th. An *Award of Merit* to Sir Trevor Lawrence, Bart., M.P., for *Calanthe vestita versicolor.* The flowers are large, white, the centre tinged with yellow and crimson; it is one of the Burford Lodge hybrids. The same Award was made to Sir Trevor for *Cypripedium Leeanum giganteum*, which is a very fine form of this hybrid, and which originated, we think, with Mr. Cypher, of Cheltenham. The same Award was conferred on Messrs. Pitcher and Manda, Hextable, for *Cypripedium Leeanum Masereelianum*, which is a superb flower, beautifully marked.

(*Continued under Plate* 451.)

J. Nugent Print. ad. et lith.

B.S. Williams & Son Publrs.

LÆLIA AUTUMNALIS ALBA.

LÆLIA AUTUMNALIS ALBA.

[Plate 451.]

Native of Mexico.

Epiphytal. *Pseudo-bulbs* clustered, ovate, tapering upwards, much ribbed, some three to six inches long, two-leaved. *Leaves* linear-oblong or lanceolate from the top of the pseudo-bulb, spreading, thick and leathery in texture, and about six inches in length. *Scape* terminal, bearing numerous flowers in a loose raceme, pleasantly perfumed, large and showy in the typical plant, but in the variety now before us they are wholly pure white, saving a tinge of yellow on the lip. *Sepals* and *petals* spreading, the former lanceolate-acuminate, the latter ovate-acuminate; *lip* three-lobed, the side lobes erect, but not enclosing the column, oblong with rounded tips, the middle lobe oblong, the tip recurved, the whole of the flower pure snowy white, saving a faint tinge of yellow on the disc of the lip.

Lælia autumnalis alba, *supra.*

A beautiful pure white-flowered form of the old favourite *Lælia autumnalis*, which was first brought to this country from Mexico nearly sixty years ago, where it is known by the name of "Flos de todos los Santos," or All Saints' Flower. This species has produced several remarkable coloured varieties, amongst which the finest form may be easily recognised in the variety *atro-rubens*, introduced some twelve years ago by the Messrs. Backhouse & Son, of York, and figured at plate 49 of this work. . The variety known as *venusta*, having large flowers of a rosy mauve, is another distinct form, but in the present case we have a variety quite destitute of colour, saving the yellow stain on the disc of the lip; and this tinge of yellow in a white flower, in our estimation, serves to give it vivacity and brightness, and without which the flower appears dead and lifeless. We have seen this before, flowering in the collection of G. C. Raphael, Esq., under the care of his gardener, Mr. Swan, but it was on the wane when we saw it, and considerably too late for figuring. In the autumn of last year (1891), however, a plant flowered in our own collection in the Victoria and Paradise Nurseries, Upper Holloway, out of an importation we received direct, which proved equally as good as the plant we had previously seen blooming in Mr. Raphael's garden at Englefield Green. This variety still continues somewhat rare in collections, and it is very singular that so many species of Orchids should produce "albino" forms just at the time when they are most prized by the growers of these plants.

Lælia autumnalis alba is a neat-growing evergreen plant, having ribbed bulbs and rich green leaves which mostly grow in pairs, and from between which the scape arises, bearing several flowers, which measure some three and a half inches across, wholly pure white, saving a yellow streak on the disc of the lip. We have seen a variety which has the front lobe of the lip tinged with rose-colour, but this detracts from the beauty and the purity of the white flower. The plant likes an abundance of sunshine and plenty of fresh air to grow it to perfection, and also copious supplies of water when growing, and at no season should it be kept dry, a plan we have seen many growers adopt. It should not be overburdened with soil about its roots, but what it has must be of the sweetest; we have found good peat-fibre to suit it best, and this must be well drained.

AWARDS MADE BY THE ORCHID COMMITTEE *(concluded from under Plate* 450*)*.

An *Award of Merit* was also given to Baron Schroeder for *Schomburgkia Sanderiana*, a distinct kind, having rich deep rose-coloured flowers, which have a flush of crimson. Also to Mr. Sander for *Cymbidium pulcherrimum*, which is similar in its growth to *C. eburneum*; the spike, however, is pendent, bearing about a dozen flowers, which are waxy white, the sepals and petals having a dark crimson streak in the centre, variously tinged with the same colour; the lip three lobed, the side lobes streaked with crimson, the middle lobe yellow in the centre, and dark crimson at the sides, the base rich yellow.

THE WILLIAMS MEMORIAL FUND.

THE FOLLOWING MEDALS AND PRIZES HAVE BEEN AWARDED THIS YEAR BY THE WILLIAMS MEMORIAL TRUSTEES.

To Baron Schroeder, at the Temple Show of the Royal Horticultural Society, May 25th and 26th, large Silver Memorial Medal for the finest Group of Orchids in the Show.

To Mr. Curry, West End, Wilton Road, Salisbury, at the International Horticultural Exhibition, Earl's Court, May 27th and 28th, large Memorial Medal and a Prize of £5 for a Group of Orchids and Foliage Plants covering 200 superficial feet. This was offered in addition to the £15 prize offered by the Exhibition Committee.

J. Nugent Fitch del. et lith.

B.S. Williams & Son Publrs

EPIDENDRUM AMABILE

EPIDENDRUM DICHROMUM AMABILE.

[Plate 452.]

Native of Bahia and Pernambuco.

Epiphytal. *Pseudobulbs* clustered, ovate, fusiform, from three to six inches long, bearing two or three leaves on each bulb; these are ligulate, acute, from six inches to a foot in length, leathery in texture, and deep green. *Scape* racemose or paniculate, in the wild specimens we are told they attain a height of three or more feet, bearing many flowers. *Flowers* measure about two inches across, and vary much in colour; *sepals* linear-lanceolate, soft rose, faintly tinged with yellow; *petals* obovate or broadly spathulate, much wider than the sepals, and of a deeper rose colour; *lip* three-lobed, the side lobes oblong, with reflexed tips, rich purple, middle lobe obcordate, emarginate, ribbed on the disc, wholly rich crimson-purple, with darker streaks, the border white. *Column* bearing two blunt wings, white tinged with purple.

Epidendrum dichromum amabile, *Bateman, Botanical Magazine,* t. 5491.

Epidendrum dichromum, *Lindley, Botanical Register, misc.,* No. 129. *Id., Folia Orchidacea, Art. Epidendrum,* No. 76. *Reichenbach fil, Gardeners' Chronicle,* 1866, p. 219.

Epidendrum amabile, *Godefroy's Orchidophile,* 1887, p. 304.

This is a plant that most growers have had a difficulty in keeping long together in a thriving condition In the early days of this species, many people potted it in pure sharp sand, but this did not appear to suit it; we have found it to thrive best when grown upon a block of wood, and with very little soil. This block of wood should have its end plunged in the drainage of the pot, and which should be surfaced with very sandy peat fibre, this will induce the roots to shoot out and penetrate it. The plants bear full exposure to the sun and light, except during the hottest part of the day, and when growing it requires to be kept in the full heat of the Cattleya house with a very moist atmosphere. It may be rested cooler, but at no period of the year should it be allowed to feel the effects of drought, many plants suffering more from the want of nourishment during their resting season than from any other cause.

The plant here figured belongs to a genus which was not popular a few years ago with the majority of Orchid-growers in this country, the same being very extensive, and the poor ones, having a great tenacity of life, survived where other plants did not. Consequently, in the early days of Orchid cultivation, when every Orchid plant was carefully conserved, our houses

were filled with coarse-growing weedy-looking plants, mostly having dull-coloured flowers, but many of these yielded a grateful and exquisite perfume. Most of these plants, however, have disappeared, and we have now many species in cultivation which do not stand second to any plants belonging to the order. Amongst these we may specially mention such kinds as *E. arachnoglossum*, *E. atro-purpureum*, *E. cnemidophorum*, *E. Frederici Guilielmi*, *E. myrianthum*, *E. nemorale*, *E. prismatocarpum*, *E. vitellinum majus*, *E. Wallisii*, and many others, all beautiful and showy-flowered species, and all deserving world-wide cultivation and care. In the year 1864 Messrs. Hugh Low and Co., of Clapton, introduced the very fine plant which we now have under consideration from the neighbourhood of Bahia, and from this early importation we had numerous varieties flower in the following years. Mr. Low's collector found the plant abundant, growing in exposed places on the river banks, on the lower branches of shrubbery bushes, and its roots were growing down into the sand beneath.

Epidendrum dichromum amabile is a very beautiful and showy evergreen species, very variable in colour, and having oblong-ovate pseudo-bulbs, bearing two or three strap-shaped leaves, scape paniculate, three or more feet high, and bearing many flowers, which are individually nearly two inches across; sepals linear-lanceolate, petals broader, obovate, and deeper-coloured than the sepals, but these vary much in colour, some being of the beautiful rose-colour as in the example here figured, while in others they are nearly pure white; lip three-lobed, lateral lobes curved over the column, oblong, reflexed at the tips, where they are purple, middle lobe obcordate, deep crimson or crimson-purple with a white marginal border.

The specimen from which our figure was taken flowered in the very choice collection of M. Finet, of Argenteuil, near Paris, in the autumn of last year, continuing in full beauty a very long time.

CYPRIPEDIUM PITCHERIANUM
(WILLIAMS' VARIETY)

CYPRIPEDIUM PITCHERIANUM.

(WILLIAMS' VARIETY.)

[Plate 453.]

Garden Hybrid.

Epiphytal, ebulbous. *Leaves* distichous, broadly ligulate, rich green on the upper side, marbled with a deeper green, paler beneath, where it is also ornamented with numerous lines of reddish brown, which proceed from the base upwards. *Scape* erect, somewhat stout, of a purplish hue, slightly hairy, bearing a large ovate bract and a large and gorgeous flower; the *dorsal sepal* is large and pure white, faintly tinged with pale green at the base, the centre being marked with a broad stripe of deep Indian-red, and the lower half beautifully blotched and shaded with deep vinous purple, leaving the large upper part of the purest white; *lower sepal* smaller, pale green, veined with deep green; *petals* prettily undulated on the upper margin, where they are also fringed with black hairs, the whole surface being of a light purplish brown, spotted near the base with deep purple, and having a dark central band; *lip* large and rounded, reddish brown, with a deep yellow border, greenish yellow beneath. *Staminode* large, rosy purple, with green centre.

Cypripedium Pitcherianum (Williams' var.), *B. S. Williams & Son's Catalogue of New Plants*, 1892, p. 8.

Cypripedium Pitcherianum, *Reichenbach fil.*

The present plate represents a beautifully high-coloured form of this new hybrid, which flowered in our own establishment in the autumn of last year (1891), and it was awarded a First Class Certificate by the Orchid Committee of the Royal Horticultural Society, when shown before them on October 27th of the same year. This hybrid in the first place was raised between *Cypripedium Harrisianum superbum* and *C. Spicerianum*, and it was dedicated by Reichenbach to Mr. J. R. Pitcher, the celebrated Cypripedium amateur in New York, but who is now at the head of the nursery firm of Messrs. Pitcher and Manda, in New Jersey.

The variety whose portrait we now lay before our readers was raised in the Victoria and Paradise Nurseries, and it may be considered one of the best productions up to the present time, the parents being both good forms of *C. Harrisianum superbum* and *C. Spicerianum magnificum*, and here we wish to specially point out the chances of superiority which favour the artificially raised hybrid to those which come about through natural causes. In the latter case the parentage is a matter of chance; but in the former, the varieties are carefully selected by the hybridiser, and consequently highly prized flowers are the result. We would therefore

commend this matter to the attention of all those entering upon this now very fashionable pursuit, viz., the selection of the best varieties for the parents of their seedlings.

The variety of *Cypripedium Pitcherianum*, here figured, is a bold and robust grower, having large strap-shaped leaves some twelve inches or more long, and some two inches broad, slightly tessellated on the upper surface with deep green upon a paler green ground colour. The flowers also are large and handsome, the dorsal sepal being very broad and slightly recurved at the sides. The base is green, and in the centre is a broad streak of deep chocolate, and from the base spring bands of the richest vinous purple, leaving a broad margin of pure white; lower sepal much smaller, pale greenish white; petals broadly strap-shaped, undulated, fringed with black hairs on the upper margin, reddish brown, with a darker central streak; lip large and obtuse, the upper part reddish brown with darker veins, pale greenish below, the mouth being bordered with yellow. We predict for this plant a great future, as, in addition to its being free flowering, it is very pleasing in colour, and produces short spikes.

We have found this plant not to differ in its requirements from other members of the family. We keep them all tolerably warm all the year round, near the glass, and with a moist and humid atmosphere, giving them plenty of light, but never allowing the rays of the sun to shine upon them during the hottest part of the day. The soil should be good peat fibre and chopped sphagnum moss, and the drainage must be perfect to maintain the plants in good vigorous health.

AWARDS MADE BY THE ORCHID COMMITTEE OF THE ROYAL HORTICULTURAL SOCIETY, IN THE FIRST QUARTER OF THE YEAR 1892.

JANUARY 12th. To C. J. Lucas, Esq., *First Class Certificate* for *Lælia furfuracea* (*Lucas's variety*), flowers much larger than the type, and bright rosy crimson in colour.

To G. Douglas, Esq., Dalkeith, N.B., *First Class Certificate* for *Lælia anceps Ballantinei*, a very fine form, with a rich purple lip.

To Norman Cookson, Esq., Wylam-on-Tyne, *First Class Certificate* for *Cypripedium Calypso* (*Oakwood var.*), a very fine hybrid between *C. Boxallii atratum* and *C. Spicerianum*; dorsal sepal large and broad, greenish white at the base, having a dark maroon central streak, from which spring feathery lines of rosy purple; petals and lip like a good form of *C. Leeanum*.

To Messrs. James Veitch and Sons, Chelsea, *First Class Certificate* for *Lælio-Cattleya Cassiope*, a cross between *Lælia pumila* and *L. exoniensis*; a large rosy crimson flower. The same award was made to the firm for *Epidendrum Endresii-Wallisii*, a cross between *E. Wallisii* and *E. Endresii*, and quite intermediate between the two species.

(*Continued under Plate* 454.)

DENDROBIUM CILIATUM.

DENDROBIUM CILIATUM.

[Plate 454.]

Native of Burmah.

Epiphytal. *Pseudobulbs* tufted, terete, slender, striated between the leaves, from six inches to eighteen inches in length. *Leaves* sub-terminable, sessile, oblong-acute, from two to three inches long, pale green, thin in texture and deciduous. *Racemes* terminal and lateral from the upper nodes, some twelve inches or more in length, many-flowered. *Flowers* about an inch across, *dorsal sepal* linear-oblong, the lateral ones being slightly falcate; *petals* oblong-spathulate, all of a uniform yellowish green; *lip* three-lobed, yellow streaked with bright brown; side lobes incurved, erect, but not covering the column; front lobe triangular, furnished on the edges with long clubbed hairs; disc bearing three equidistant raised fleshy plates.

Dendrobium ciliatum, *Parish* in Hort. Low, *Hooker*, *Botanical Magazine*, t. 5430.

The present species is neither a gay-flowered nor a showy plant, and it would not attract the attention of an ordinary observer, but to a trained and scientific eye it possesses beauties in its singular-formed and somewhat sombre-coloured flowers which are not observed by the ordinary amateur. It is now about thirty years ago since the plant was first discovered in Burmah, and sent home to Mr. Stuart Low, then the head of the Clapton Nurseries, with whom it flowered for the first time in the month of November, 1863, when it caused some excitement in the botanical world. The plant from which our drawing was taken grew and flowered in the choice collection of M. Finet, Argenteuil, near Paris.

Dendrobium ciliatum is a tufted species, forming stems from a few inches to a foot or eighteen inches long, and when the shortest of the plants have flowered we have seen them distinguished by the varietal name of *breve*, but this we do not think is worthy of being made a variety, for the flowers are identical, and we have seen the plants which have been called *breve*, making pseudobulbs eighteen inches in length, thus proving the instability of the variety. It is a slender-growing plant, producing racemes as long as its bulbs, bearing from six to eighteen flowers, which are an inch across, the outer segments nearly alike, and all of a yellowish green, the lip being yellow streaked with reddish brown, and the edges ornamented with a row of hairs, which are clubbed at the points. The flowers appear during the autumn and winter months, lasting a considerable time in perfection. The plant may be grown in a pot, basket, or upon a block of wood; it is best to keep the variety *breve* upon the latter, for we have observed that when transferred to a pot or basket, it receives more nourishment than upon the

block, the pseudobulbs begin to grow longer, and it no more retains its name of "short-growing." Peat-fibre and chopped sphagnum in about equal parts should be used for soil, and this must be thoroughly drained. It enjoys an abundance of heat and moisture during the growing season, but it may be wintered in a cooler and drier place, taking care that the plant does not suffer from over dryness, as the stems being slender they sometimes are difficult to restore if this occurs.

AWARDS MADE BY THE ORCHID COMMITTEE (*continued from under Plate* 453).

An *Award of Merit* to H. M. Pollett, Esq., Fernside, Bickley, for *Cypripedium Enfieldense*, which is a very pretty cross between *C. Hookeræ* and *C. Laurenceanum*.

An *Award of Merit* to C. Ingram, Esq., Elstead House, Godalming, for *Cypripedium gigas*, a very fine hybrid, the parentage of which was not given, having a nearly circular dorsal sepal, very dark at the base, with a broad margin of white, the dark colouring running up in dark purplish lines.

An *Award of Merit* to Messrs. Charlesworth, Shuttleworth and Co. for *Odontoglossum Rossii albens*, figured at plate 434 of the present volume.

A *Botanical Certificate* to Messrs. F. Sander and Co., St. Albans, for *Angræcum polyurum*, having white flowers, with long twisted spurs.

FEBRUARY 9th. To Baron Schroder, The Dell, Egham, *First Class Certificate* for *Odontoglossum crispum nobilior*, a magnificent flower, large and heavily spotted. The same award was made to this exhibitor for *O. Pescatorei Schroderianum*, heavily spotted with purple.

To Drewett O. Drewett, Esq., Riding Mill-on-Tyne, *First Class Certificate* for *Cypripedium Juno*, between *C. Fairrieanum* and *C. callosum*, which bears considerable resemblance to a fine form of *C. vexillarium*.

To Messrs. James Veitch and Sons, Chelsea, *First Class Certificate* for *Cypripedium Hera*, a name already occupied, and which was afterwards altered to *Adrastus*; it is the result of a cross between *C. Boxallii* and *C. Leeanum*, a very large flower with a large dorsal sepal, broadly bordered with white.

To Messrs. James Veitch and Sons, Chelsea, *First Class Certificate* for *Zygopetalum leucochilum*, a cross between *Z. Burkei* and *Z. Mackayi*, a very fine white-lipped flower.

An *Award of Merit* to W. R. Lee, Esq., Beech Lawn, Ardershaw, Manchester, for *Dendrobium splendidissimum Leeanum*, a cross between *D. nobile pendulum* and *D. heterocarpum philippense*, having pseudobulbs upwards of a yard in length.

An *Award of Merit* to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne, for *Dendrobium Cassiope*, a cross between *D. japonicum* and *D. nobile albiflorum*, a pretty free-flowering plant with large creamy white flowers with dark base.

An *Award of Merit* to R. J. Measures, Esq., Cambridge Lodge, Camberwell, for *Cypripedium insigne, Cambridge Lodge var.*, an elegant small-flowered kind, with a much-spotted dorsal sepal.

(*Continued under Plate* 455.)

CYPRIPEDIUM ORPHANUM

CYPRIPEDIUM ORPHANUM.

[Plate 455.]

Garden Hybrid.

Epiphytal, ebulbous. *Leaves* distichous, some five to six inches in length and an inch and a half to two inches in breadth, channelled above, carinate beneath, light green, netted and marmorated with dark olive-green on the upper side, pale green below. *Scape* terminal, erect, one-flowered, deep brownish purple, slightly hirsute, the bract being very short. *Flowers* large and handsome, *dorsal sepal* ovate, white, tinged in the centre with bright emerald-green, and on the lateral margins with rosy purple; it has a brownish purple median band, with numerous equidistant smaller ones of the same hue; *lower sepal* white, tinged with pale green, with darker green veins; *petals* greenish purple, ivory-white on the borders, and a broad brownish purple median stripe, in addition the petals are slightly freckled towards the base with black dots, and the margin ciliated with black hairs; *lip* obtusely ovate, deep rosy purple, pale beneath.

Cypripedium orphanum, *Reichenbach fil*, in *Gardeners' Chronicle*, xxvi, p. 166.

The present plant is one of the Veitchian hybrids raised by Mr. Seden at Messrs. James Veitch & Sons' Nurseries, King's Road, Chelsea; and although some years have elapsed since this plant first flowered, it still retains a foremost place amongst the bright-coloured and pleasing kinds. We do not know the exact parentage of this plant, but the flower shows evidently that *C. Druryi* was one of its parents, and it carries the distinct marks in the broad median band of its dorsal sepal and in the petals, whilst by the marbled leaves some form of *C. barbatum* we take to have been the other, but irrespective of its parentage it is a most distinct and beautiful variety. The plant here figured flowered in our collection in the Victoria and Paradise Nurseries.

Cypripedium orphanum is a dwarf-growing evergreen plant belonging to the coriaceous-leaved section, and requires to be kept with the other species and varieties of eastern origin. It should be grown in a pot which is well drained, and the soil may consist of good peat-fibre and sphagnum moss in about equal parts, the latter to be chopped tolerably fine to enable it to mix more freely with the peat-fibre; to this may be added some turfy loam with advantage, the turves of loam being well beaten, so that all the fine soil may be removed, and the fibrous part mixed with the peat and sphagnum moss. This mixture we have found to suit most of the species and varieties belonging to the *C. barbatum* section. It likes a moist atmosphere, and care should be taken that red spider does not attack it, nor the black thrips. These latter are great enemies to these

plants if allowed to get any headway, so carefully remove them as they put in an appearance.

Awards made by the Orchid Committee (*continued from under Plate* 454).

An *Award of Merit* to Drewett O. Drewett, Esq., Riding Mill on-Tyne, for *Cypripedium Ceres*, a cross between *C. hirsutissimum* and *C. Spicerianum*, having much the appearance of the other crosses with *C. hirsutissimum*, but this is certainly the finest yet seen.

An *Award of Merit* to Baron Schroder, The Dell, Egham, for *Odontoglossum ioplocon*, which is a plant very much like *O. Edwardii*, and with a spike of bloom of the same colour.

An *Award of Merit* to Sir Trevor Lawrence, Bart., for *Lycaste Youngii*, a small but beautiful soft yellow-flowered species which appears to be a profuse bloomer.

An *Award of Merit* to Messrs. B. S. Williams and Son, Victoria Nursery, Upper Holloway, London, for *Lycaste Youngii*.

A *Cultural Commendation* to Lord Foley, Ruxley Lodge, Esher, for *Cœlogyne cristata*, a group of well-grown and beautifully flowered plants.

Silver Gilt Medal to Messrs. Hugh Low and Co., Clapton, for a group of Orchids.

Silver Floral Medal to Messrs. B. S. Williams and Son, Holloway, for a group of Orchids.

Silver Banksian Medal to Messrs F. Sander and Co., St. Albans, for a group of Orchids.

March 8th. An *Award of Merit* to J. F. Jackson, Esq., Bonner Place, Bexley, Kent, for *Odontoglossum Pescatorei* (*Jackson's var.*), a very much-spotted flower.

An *Award of Merit* to Messrs. James Veitch and Sons, Chelsea, for *Cypripedium Ianthe*, a cross between *C. Harrisianum* and *C. venustum*.

An *Award of Merit* to the same firm for *C. Brysa*, a cross between *C. Sedenii candidum* and *C. Boisserianum*; this seems to be a large form of the first-named, tinged with green.

A *Botanical Certificate* to Messrs. Lewis and Co., Southgate, for *Disa incarnata*, a very pretty species, having orange and yellow flowers; it is a native of Madagascar.

A *Botanical Certificate* to Messrs. Hugh Low and Co., Clapton, for *Dendrobium amethystoglossum*, a species introduced from the Philippines just twenty years ago.

A *Botanical Certificate* to W. L. Barkley, Esq., The Briars, Reigate, for *Oncidium chrysomorphum*, a very rare species, having flowers less than an inch across, golden yellow.

(*Continued under Plate* 456.)

CATASETUM LONGIFOLIUM

CATASETUM LONGIFOLIUM.

[Plate 456.]

Native of Demerara.

Epiphytal. *Pseudobulbs* fusiform, clustered, somewhat slender, deflexed, clothed with large white, sheathing scales. *Leaves* linear, ligulate, deep green, deciduous. *Peduncle* springing from the base of the pseudobulb and like it deflexed, of a purplish brown colour, many-flowered. *Bracts* small, oblong-acute. *Sepals* and *petals* broadly oblong, turned backwards, greenish yellow tipped with crimson; *lip* helmet-shaped, having a fringed membrane under the limb, rich yellow tipped with deep lake.

Catasetum longifolium, *Lindley, Botanical Register*, 1839. *Idem. Sertum Orchidaceum*, t. 31. *Refugium Botanicum*, t. 32.

Monocanthus longifolius, *Hooker, Botanical Magazine*, t. 3019.

This plant does not belong to a very popular genus amongst the Orchid growers of the present day, but in the earlier days quantities of these plants were grown, which used to be separated into three genera, viz., *Catasetum*, *Monocanthus* and *Myanthus*, but as Sir Robert Schomburgk afterwards discovered flowers of all three genera growing upon one spike, and the same thing has occurred in our gardens at home with cultivated plants upon more than one occasion, it has led to the absorption of the two last names by the older one of Catasetum, and the two latter genera have been disused. The plant we have now under consideration was discovered by Sir R. Schomburgk some fifty-seven years ago, growing on the stems of the Moriche or Ita Palm (*Mauritia flexuosa*), in the Camuri Creek, a tributary of the river Demerara. He afterwards found it growing in profusion on the same Palm in the low marshy grounds of the streams called Wiwai and Wicki, both tributaries of the river Berbice; here the Mauritia Palm grows in great abundance, reaching its maximum about the delta of the Orinoco, where the flooded forests of the region become the home of the tribe of Indians known as Guaranes, who suspend their dwellings in the tops of the trees.

Catasetum longifolium is a very handsome and interesting species, and bloomed first in this country in the year 1839—first with Mr. Brocklehurst, of The Fence, Macclesfield, and a month or two afterwards with Mr. Morris, of The Retreat, Battersea, who had received it from Demerara through his friend, Mr. Henry Gloster. The plant here figured, which is a very good variety, flowered in the Royal Gardens, Kew.

These plants are very easily grown into good specimens, usually thriving best in small hanging baskets, but this species does best upon a block of wood, which enables its long leaves to hang down in a natural position, and the flower-spike being pendent, it is also seen to the best advantage when grown in this manner. But for the other species, if the baskets are well drained, they may be planted in good brown peat-fibre and chopped sphagnum moss in about equal proportions. They will do well in the growing season in the East Indian house, as they require a great amount of heat, and also a fair share of water to their roots, and moisture in the atmosphere. The species are all deciduous, and after the bulbs are nicely finished off, the leaves will fall away, when water should be entirely withheld and the temperature reduced, the cool end of the Cattleya house being amply hot enough, and here the bulbs are not likely to suffer from drought. After re-potting in spring, the young growths first begin to start, and this is the only time one requires to be careful in watering, in order to avoid the water remaining in the young and tender shoots, which is apt to rot them; and as the spike mostly appears with the young growth, or when that is about half-made, the flowers get affected in a like manner.

AWARDS MADE BY THE ORCHID COMMITTEE *(continued from under Plate* 455*)*.

A *Cultural Commendation* to F. W. Nixon, Esq., Edward Street, Leek, for a fine well-flowered plant of *Odontoglossum maculatum*, bearing four spikes.

Silver Floral Medal to Messrs. F. Sander and Co., St. Albans, for a group of Orchids.

Silver Banksian Medal to Messrs. Pitcher and Manda, Hextable, for a group of Orchids.

MARCH 22nd. To E. Miller Mundy, Esq., Shipley Hall, Derby, *First Class Certificate* for *Dendrobium Phalænopsis Schroderianum*, a very large dark-flowered form.

To F. W. Moore, Esq., Curator Royal Botanic Gardens, Glasnevin, Dublin, *First Class Certificate* for *Moorea irrorata*, a new genera of Orchids, which has a stout upright spike, bearing large flowers; sepals and petals white at base, broadly tipped with chestnut-brown; lip three-lobed, yellow and white, dotted with purple spots.

To E. Moon, Esq., Cassiobridge, Herts, an *Award of Merit* for *Dendrobium infundibulum* (*Cassiobridge var.*), a fine form, having fine broad sepals and petals, marked as in the typical plant.

To E. Miller Mundy, Esq., Shipley Hall, Derby, an *Award of Merit* for *Dendrobium Phalænopsis Schroderianum delicatum*, a charming form, with pale flowers.

To F. W. Moore, Esq., Botanic Gardens, Glasnevin, Dublin, a *Botanical Certificate* for *Megaclinium falcatum*, an old and curious Orchid, remarkable for its long, flattened flower stalk, having a central row of small flowers seated along each side.

To Messrs. F. Sander & Co., St. Albans, a *Botanical Certificate* for *Epidendrum Lauchianum*, a species with long drooping racemes, densely laden with small yellow and brown flowers.

(*Continued under Plate* 457.)

J. Nugent Fitch. del. et lith.

B.S. Williams & Son Publrs

LISSOCHILUS GIGANTEUS.

LISSOCHILUS GIGANTEUS.

[Plate 457.]

Native of the Congo, South-West Africa.

Terrestrial. *Pseudobulb* or tuber hidden below the surface of the soil, bearing oblong-acuminate, plicate leaves some three or more feet long, and rich green. *Peduncle* in its wild state said to attain a height of sixteen feet, but under cultivation it has not reached to more than half that altitude, bearing a raceme of some twenty to forty flowers, each of which are three to four inches across. *Bracts* very conspicuous, cuneate-oblong, apiculate, shorter than the stalked ovaries. *Sepals* very small, reflexed greenish; *petals* broadly oblong, forming quite a hood over the lip; these are bright rose colour on the outside, rosy lilac within, with deeper coloured veins; *lip* trowel-shaped, three-lobed, the side lobes erect, rounded, the middle lobe three inches long, spreading, undulate at the sides, apiculate in front, colour rosy lilac, and purple round the outer border, with darker veins, and on the disc are three yellow, fleshy plates: the base is much swollen, terminating in a short, straight, obtuse spur. *Column* triangular, green, yellow at the base.

Lissochilus giganteus, *Welwitsch, ex Reichenbach fil in Flora*, xlviii. (1865), p. 187. *Gardeners' Chronicle*, 3rd series, 1888, iii., p. 616, with fig.

The plant we here figure was first found by Dr. Welwitsch, the celebrated African explorer, in 1862-1863, but no living plants were received from its discoverer. It was again found by M. Monteiro, but we do not think any addition was made to our collections from this find; we are indebted to the efforts of M. Linden, of Brussels, for the first living plants that were introduced to Europe. The plant was first flowered in Europe by the President of the Royal Horticultural Society, Sir Trevor Lawrence, Bart., in his celebrated collection at Burford Lodge, Dorking, and it was exhibited to the public at the Society's exhibition, held in the Temple Gardens in 1888. The second time of its flowering, a little later in the same season, was by D. Tod, Esq., of Glasgow, and this plant graced the exhibition held in that city. It had a spike seven and a half feet high, and bore a raceme of twenty-six flowers. The third time of flowering this plant—from which our plate was taken—was in January of the present year (1892), in the garden of M. le Duc de Massa, Chateau de Franconville, par Luzarches, France, who, with his usual kindness, sent it to us to figure.

The following account of this plant is from Mr. Johnston's book on the Congo. He says, "In the marshy spots down by the river shore are masses of that splendid Orchid, *Lissochilus giganteus*, a terrestrial species that shoots up often to the height of sixteen feet from the ground, bearing such a head of red-mauve

and golden, scented blossoms as scarcely any flowers can equal for beauty and delicacy of form. These Orchids, with their light green, spear-like leaves, and their tall, swaying flower-stalks, grow in groups of forty and fifty together, often reflected in the shallow pools of stagnant water round their bases, and tip the foreground of the high purple-green forest with a blaze of tender peach-like colour. Clumps of a dwarf Palm (*Phœnix spinosa*), which bears a just eatable starveling date, hedge in these beautiful Orchids from the wash of the river, and seem a sort of water-mark that the tides rarely pass; but the water often leaks through the mud and vegetable barrier, and forms inside the ring of dwarf Palms many little quiet lagoons, not necessarily unhealthy, for the water is changed and stirred by each recurring tide."

This plant appears to be plentiful on the banks of the mouths of the rivers in South-Western tropical Africa, and we are told it is occasionally submerged, and afterwards roasted in soil as hard as bricks, so that it is almost wonderful our efforts have been so successful under cultivation; but this is another remarkable instance of the cultivator's skill in getting plants to thrive and to bloom under circumstances very different to their surroundings in a state of nature. The following are the details of its management, kindly supplied by M. le Duc de Massa, who has so successfully bloomed this gorgeous plant:—"The compost is made up of sharp silver-sand, loam and leaf-mould, with cow-manure added. From the end of October till May I keep it in the Indian house, then towards the end of April, when I begin to heat my aquarium, I place the plant with the pot plunged to within five or six centimetres in water. During the resting season I always keep the compost a little moist. The flower spike has been produced by a not very strong growth, but it measured two metres eighty centimetres high. It has produced at least forty flowers. The first flowers opened about November 20th, 1891. It must be re-potted every year towards March or April."

AWARDS MADE BY THE ORCHID COMMITTEE OF THE ROYAL HORTICULTURAL SOCIETY, IN THE FIRST QUARTER OF THE YEAR 1892 (*concluded from under Plate* 456).

To Messrs. F. Sander and Co., St. Albans, a *Silver Banksian Medal* for a group of Orchids.

To E. Miller Mundy, Esq., Shipley Hall, Derby, a *Silver Banksian Medal* for a superb group of *Dendrobium Phalænopsis Schroderianum*, in variety.

To Messrs. Charlesworth and Shuttleworth, Clapham, for a group of *Oncidium sarcodes*.

J.Nugent Fitch del.et lith.

B.S.Williams & Son. Publrs

DENDROBIUM CRASSINODE ALBUM.

DENDROBIUM CRASSINODE ALBUM.

[Plate 458.]

Native of Burmah.

Epiphytal. *Stems* tufted, ascending, from five inches to a foot in length, formed throughout of swollen nodes. *Leaves* strap-shaped, acute, somewhat thin in texture, and deciduous. The *flowers* differ only from those of the original and typical plant in their want of the mauve colour at the tips of the sepals and petals and the lip, hence becoming a pure white, saving the stain of deep orange-yellow at the base of the lip, which renders it a very elegant and chaste variety.

Dendrobium crassinode album, *Williams M.S.*

Dendrobium crassinode albiflorum, *Hort.*, *Gardeners' Chronicle*, iv., 1875. p. 683.

The variety here figured was originally made known to English Orchid-growers through Messrs. Low and Co., of Clapton, and it has since been brought home by other firms; we ourselves have imported it with the typical plant upon more than one occasion. Although the type, as well as the variety, appears to be widely distributed throughout the Burmese and Siamese territories, the latter appears to be scarce, few white-flowered forms having made their appearance amongst the great numbers which have been brought to this country. We have found it upon rare occasions in the gardens of Mr. Sherwood, Brixton Hill, also in the collection of the late Mr. Hall, of Brixton, and various other gardens.

The present plant is charming in its purity, having nothing but the stain of deep yellow at the base of the lip. It sometimes passes under the name of *albiflorum*, but the name here given was an MS. one given by the head of our firm before the descriptive name of Reichenbach. It is a variety that does not appear to suffer in health and strength from being an albino, as many do, for it is of vigorous habit, whilst it is an abundant bloomer, and it flowers with the typical plant, commencing about January or February and continuing on through March and April, so that before the flowers are past the young growths begin to push up, and the plants are ready for full heat and moisture as soon as the blooming season is over. It likes a good deal of heat at the time of growth, and a considerable quantity of moisture, both in the atmosphere and at its roots also, and therefore it should be grown in the warmest part of the East Indian house, or a warm stove, such as is used for the growth of Crotons, for it enjoys exposure to sunshine, although it will be well to lightly shade the Dendrobiums during the hottest part of the day. The plant may be grown upon

a block of wood, in a hanging basket, or treated as a pot plant, but we prefer basket culture before any other; these should be well drained, and the plant not encumbered with too much soil about its roots, which should consist of good brown upland peat fibre and sphagnum moss. This species, when its pseudobulbs are made up, should be gradually dried off, at which time it may be removed into a cooler but sunny house, and when its leaves are all off the stems it may be moved into its winter quarters, keeping it dry but not shrivelling it, until the flower buds begin to show, when more heat and moisture will be necessary.

A New Orchid Pot.—A friend has sent us a sample of a new patent Pot, not specially as an Orchid pot, but which, to our mind, is a grand acquisition for these plants, and upon seeing it one is led to only wonder that pot-makers have never thought of it before. There is nothing objectionable in its appearance. The pot is made of the same material as other pots; the difference lies only in its bottom, which is turned up into a cone like the bottom of a port-wine bottle, and this is cut into narrow slits, so that the water has full egress and is carried away, leaving nothing behind to cause a stale or soured state, which is so injurious to Orchid life, or, indeed, to any other kind of plant. We do not know if any particular name has been given to the pot, but we shall doubtless know more of it later on. There is one thing about it and its system of drainage—it will entirely obviate the necessity of small pots being turned upside down on the inside of the pot which is to contain the plant, and hence the extra weight is entirely done away with, there being nothing further to do but to fill in all round the inverted cone with ballast or burnt earth. This is said to be a first-class drainage material to use for this purpose, inasmuch as it absorbs a great quantity of moisture, and it gives it off to the roots in a gradual manner. We would recommend this material to anyone using the ordinary pots. This new pot has been sent to us by a friend not simply for Orchids, but for use in the ordinary greenhouse, and we have but little doubt that we shall find it answer in a marked degree. As an Orchid pot, however, we think it will excel anything we have ever seen, and we heartily commend it to the notice of all interested in growing Orchids.—W. H. G.

J. Nugent Fitch del. et lith.

B.S. Williams & Son Publrs

CŒLOGYNE LACTEA.

CŒLOGYNE LACTEA.

[PLATE 459.]

Native of Burmah.

Epiphytal. *Pseudobulbs* clustered, oblong, stout, tapering gradually upwards, deeply furrowed, between three and four inches high, light green. *Leaves* in pairs; these are cuneate-oblong, acute, some six or eight inches in length, and nearly two inches in width, strongly ribbed beneath, coriaceous in texture, and deep green. *Scape* issuing from the side of the pseudobulbs near its base, nodding, bearing from six to twelve flowers, arranged on the raceme in a two-ranked manner, these flowers measuring nearly two inches across. *Sepals* broadly oblong, acute, soft creamy white; *petals* much smaller, linear-oblong, coloured the same as the sepals; *lip* three-lobed, side lobes erect, creamy white, slightly tinged with yellow, and veined with brown; middle lobe yellow at its base, pure white in front.

CŒLOGYNE LACTEA, *Reichenbach fil, Gardeners' Chronicle*, 1885, i., p. 692. *Williams' Orchid Grower's Manual*, 6th edition, p. 634.

The present species cannot claim a position amongst the gay and showy Orchids, but it nevertheless is well deserving a place in the pages of the ORCHID ALBUM for its quiet, unassuming elegance and modest beauty. We have found it to be a great favourite with the ladies, who have frequently expressed their admiration for its flowers, and we must ourselves admit that the spike, when properly dressed with Fern, forms an elegant shoulder-spray for a ball or evening party.

The plant in question was introduced by us from Burmah some nine or ten years ago, and it appears to be somewhat widely distributed in this country, judging by the number of correspondents that have sent it to us for a name. There does not appear to be any difference in the varieties, however, but the form from Mr. Moss, of Winters Hill, Hants, was certainly the best we have seen: in this variety the sepals and petals were a trifle broader than the form here figured, and the whole flower was purer white in its colour; but the plant here figured is a very good representative of the species, and flowered in our own establishment, the Victoria and Paradise Nurseries, in the spring of the present year. Its flowers last a considerable time in full perfection.

Cœlogyne lactea is a thoroughly distinct evergreen plant, free in growth, and also an abundant bloomer. It may be easily recognised, even when not in flower, by its very thick and leathery dark green leaves, and by its pseudobulbs which are very distinctly furrowed. The flowers are quite destitute of any perfume, and therefore do not offend even the most sensitive and delicate-nerved individuals, some being too strongly scented to admit of their being used for the purpose of adornment. It is a plant which grows well with other Indian Orchids or stove

plants, and it likes an abundance of water when growing, but we usually hang it up near the glass to rest, taking care that it does not miss just enough moisture at that season, to keep the pseudobulbs from shrivelling or its leaves from turning yellow, because if this latter should happen it sadly robs the plant of beauty when in flower. The pots or baskets must be well drained, and this should always have special attention, even with the most common plant, for no plant can thrive well unless it is well and sufficiently drained. Good brown peat fibre and chopped sphagnum moss should be used, and the plant elevated a little above the pot's rim.

Cattleya maxima.—We have received from Mr. Crispin, an amateur grower of Bristol, some remarkably good flowers of this species. In his letter he says they are from the short-bulbed form. It was about forty years ago when we first saw this species blooming, and at that time it struck us as singular, and the same thought has frequently occurred, how Lindley could give it the name of *maxima*, when Mr. Cattley's plant, upon which Lindley established the genus (*C. labiata*), bore larger flowers than this. Cattleyas and Lælias would appear to form a great feature in Mr. Crispin's collection, and that gentleman informs us that he has a quantity of the *labiata* showing flower, one having twenty-one blooms just opening—this must be magnificent. He also says that he has *Lælia Perrinii* with seventeen blooms, and *Cattleya Bowringiana* with numerous fine spikes, which undoubtedly have a grand effect, more especially as he has a quantity of Cypripediums and other things in full beauty.—W. H. G.

J.Nugent Fitch del.et lith.

B.S.Williams & Son Publ[rs]

ODONTOGLOSSUM TRIUMPHANS AUREUM.

ODONTOGLOSSUM TRIUMPHANS AUREUM.

[Plate 460.]

Native of the United States of Colombia.

Epiphytal. *Pseudobulbs* oblong-ovate, compressed, furrowed with age, some three or four inches long, and rich green in colour. *Leaves* in pairs from top of pseudobulb, ensiform, about a foot in length, persistent, and rich green. *Scape* arising from the base of the fully grown pseudobulb, attaining some two or three feet in height, and arching, bearing a raceme of large and showy flowers, which are each furnished with a small triangular bract at their base; this, however, is very fugacious. *Flowers* some three inches across, somewhat fleshy in texture; *sepals* and *petals* nearly equal, oblong, acute, ground of both soft light yellow, blotched with orange-yellow; *lip* large, clawed at the base, the edge being finely toothed, white, with a single large blotch of soft light yellow, which occupies all the anterior portion, leaving just a narrow border of pure white; a few yellow spots about the *crest*, which is yellow, with two diverging teeth. *Column* creamy white, capped with yellow.

Odontoglossum triumphans aureum, *supra.*

Odontoglossum triumphans, *Reichenbach fil in Bonplandia*, ii., t. 99. *Pescatorea*, 1860, t. 46. *Williams' Orchid Album*, ii., t. 58. *Illustration Horticole*, 1869, t. 609. *Florist and Pomologist*, 1877, t. 217. *Bateman's Monograph of Odontoglossum*, t. 23. *Williams' Orchid Grower's Manual*, p. 466.

Odontoglossum spectatissimum, *Lindley, Folia Orchidacea, Art. Odontoglossum*, No. 55.

The typical *Odontoglossum triumphans* is one of the plants found by M. Linden, when plant-collecting in the neighbourhood of Pamplona, in New Grenada, just fifty years ago; but it was about twenty-five years after its discovery, when it first appeared in cultivation with Messrs. Low and Co., of Clapton. Soon after this we saw some very fine dark-coloured forms in Messrs. Linden's establishment at Brussels, and it is in Belgium at the present time that the species is more largely grown than with us. With the English growers this plant has never reached the popularity which it deserves, hence there has been less notice taken of variations in form in this species than in many others. Nevertheless, varieties do occur from time to time, one of the prettiest and most distinct being that which we now figure, and that we are enabled to do through the kindness of A. H. Smee, Esq., in whose delightful garden at the Grange, Carshalton, are to be found many rare and beautiful plants, under the skilful management of his gardener, Mr. Cummins. The plant in question has little or nothing to distinguish it from the normal condition. It is to the flower alone that we must look for differences, which are at once distinct and charming, and a glance at our plate will show what an

unusually unique flower this is; it is a variety which we have seen in no other collection, having the sepals and petals blotched and banded with orange-yellow, in the place of dark chestnut, which is usually the case, and the front of the lip being wholly soft light yellow, in the place of brownish crimson of the typical plant. Some little confusion arose with this species in the early times, through Warscewicz sending the plant home under the name of *Odontoglossum Hallii*, a species from which it differs widely, and from which it is easily distinguished, even when not in flower.

The plant grows at a great elevation, reaching some 10,000 feet, and we have not noticed any difference in the plants coming from this altitude, and those which occur several thousand feet lower down. We have observed that this plant grows well under the same conditions as we have so frequently laid down for *Odontoglossum crispum* and *O. Pescatorei*. Indeed, we have seen the plant grow and flower when subjected to a rather lower temperature than these plants enjoy; but they are best, we think, when treated alike.

Dendrobium Phalænopsis Dellense.—This beautiful species has already been figured in the pages of the Album, t. iv., 187, but we recently received a fine spike of this lovely chaste variety from W. Bennett, gardener to C. W. Mackillop, Esq., of the Royal Crescent, Bath, bearing ten flowers, each flower measuring close upon four inches across, and forming quite a round and perfect bloom, the colour being a French white, with just a tinge of violet in the lip. This form is the most elegant that we have seen of this grand New Guinea beauty, and appears to be very free flowering. Some plants we have in bloom in our nurseries at the present time amply prove this, also its quick and easy-growing qualities. It appears to want a very strong heat, an abundance of moisture, and full exposure to the sun. We hear, too, from many growers in the country that the plant is doing admirably with them, and at this season makes a grand show From one person we hear of nineteen flowers upon one spike, which is the most we have heard of at present, but we believe even more than this number may be expected.—H. W.

CATTLEYA MOSSIÆ REINECKIANA .

CATTLEYA MOSSIÆ REINECKIANA.

[Plate 461.]

Native of La Guayra, Venezuela.

Epiphytal. Stem-like *pseudobulbs*, clavate, fleshy, and marked with depressed parallel lines, monophyllus, and clothed with large sheathing scales. *Leaves* oblong, obtuse, thick and leathery in texture, keeled beneath, and rich green in colour. *Scape* terminal, bearing usually two or three flowers which are some seven or eight inches across; *sepals* lanceolate, recurved at the apex, pure white; *petals* ovate, much broader than the sepals, but of the same pure white, lobed and undulate at the margins; *lip* three-lobed, the side lobes enclosing the column, the front expanded portion deeply bi-lobed and beautifully crisped at the edge, pure white, with a blotch of lilac-mauve; *throat* bright yellow, with radiating veins of deep rich purple, the outer border white.

Cattleya Mossiæ Reineckiana, *Reichenbach fil. Bonplandia*, iv., p. 327. *Reichenbachia*, 2nd series, vol. ii., t. 52. *Williams' Orchid Grower's Manual*, 6th edition, p. 196.

It is with very great pleasure we now place a portrait of this fine and distinct variety of *Cattleya Mossiæ* before our readers. It is not a new form, for it has been known to us for twenty-five years. We first saw it blooming with Mr. Stevenson, when he had charge of the collection of plants formed by Julius Sichel, Esq., at Timperley, near Manchester, and the variety is still held in high estimation in that locality, for last season we received a flower from Mr. Hardy, of Pickering Lodge, Timperley, which was one of fourteen upon the same plant. This must have been a charming sight even amongst Mr. Hardy's grand collection of Cattleyas, which is certainly one of the very best in Europe. This variety, although much admired, does not appear to have become widely disseminated, for to this day it is very restricted in its distribution, and as it is only imported at rare intervals, the variety must be scarce in the native home of the species. The plant here figured was grown by Mr. Cummings in the garden of A. H. Smee, Esq., The Grange, Carshalton, where there is a fine collection of varieties of the *labiata* section of the genus, and where, in the season, each variety makes a splendid show.

The variety *Reineckiana* does not differ from the typical plant in its habit or manner of growth, but resembles an ordinary plant of the species; the flowers are very charming, large, and of good substance, the sepals and petals being pure white; the lip is also white, stained on the inner side with a blotch of lilac-mauve, and having a broad border of white in front, where it is beautifully

fringed and undulated. In addition the throat is bright rich yellow, veined with lines of crimson-purple. It blooms in the spring and summer months, and if care is taken to avoid sprinkling them with water from the syringe, they will last a long time in perfection. To ensure this some growers remove their plants to a house specially set apart for their flowering specimens, but we do not approve of moving them after the flowers have expanded, for there is sure to be some slight difference either in temperature or in the atmospheric moisture which materially affects the flowers, and causes them to fade prematurely. We therefore strongly advise growers to allow not only Cattleyas but other Orchids to remain and flower in the house in which they open, if their beauties are desired to be prolonged.

This Cattleya, like all the varieties of *C. Mossiæ*, requires a good amount of brisk warmth during the growing season, and also a liberal amount of moisture in the atmosphere, but the water to their roots must be given cautiously and with care, for if too great a quantity is given it will have a very injurious effect upon the plant. Naturally these plants, although subject to a great deal of moisture, have nothing about their roots to cause dampness to lie, as occurs with a plant which under cultivation is potted in peat fibre. We find that so long as the soil retains moisture very little or no fresh water is necessary; neither can we agree with those who use the syringe for sprinkling Cattleyas overhead, a practice which leads to the loss of young shoots frequently. Although these plants do as a matter of course get a great quantity of rain upon them in the wet season, they have greater facilities for getting rid of it, either in their growths not being so erect as they are in an artificial state, or through there being greater activity in the atmosphere. The pots must be well drained, and the plant should be placed upon a cone-like mound of good brown peat fibre, with a little chopped sphagnum moss added, and all insect pests should be carefully looked after and washed off.

Awards made by the Orchid Committee of the Royal Horticultural Society, in the Second Quarter of the Year 1892.

April 12th. To Sir Trevor Lawrence, Bart., *First Class Certificate* for *Cypripedium Lawrebell*, a cross between *C. Lawrenceanum* and *C. bellatulum*, having tessellated foliage and fine large showy flowers; the dorsal sepal is of a rosy crimson, with a white border, and a tinge of green at the base; the petals dotted and spotted with a deep brown. It is a very handsome hybrid, and one of the first having *C. bellatulum* for a parent.

To Messrs. F. Sander and Co., a *First Class Certificate* for *Cypripedium Chamberlainianum*, a distinct and beautiful species, remarkable for its bright crimson lip.

(Continued under Plate 462.)

J. Nugent Fitch del et lith.

DISA TRIPETALOIDES.

L.L. Williams & Son Fulham

DISA TRIPETALOIDES.

[Plate 462.]

Native of the Cape of Good Hope.

Terrestrial. Herbaceous, roots under ground in the shape of thick fleshy tubers, forming lax trailing branches, from which fresh bulbs are formed at intervals, and new roots and leaves appear annually. The *leaves* are arranged in the form of a rosette at the base, and are lanceolate, acuminate, somewhat coriaceous in texture, and of a shining green. *Stem* erect, clothed below with large alternate, sheathing, acuminate bracts, which, however, rapidly decrease in size upwards. It attains a foot or eighteen inches in height, and bears a somewhat lax raceme of from fifteen to thirty flowers, each bloom measuring an inch across, the *sepals* being the portion of the flower most in evidence; dorsal sepal helmet-shaped, which terminates behind in a short conical spur; the lateral sepals are large for the size of the flower, oblong, rounded, all creamy white, flushed more or less with flesh colour and dotted with crimson; *petals* small, falcate; *lip* linear, oblong.

Disa tripetaloides, N. E. Brown, *Gardeners' Chronicle*, 3rd series, 1889, v. p. 360. *Ibid*, 1890, p. 766, with woodcut on p. 768.

Orchis tripetaloides, *Linneus fil.*

It is quite astonishing how rapidly the little terrestrial species of this family are becoming favourites with our Orchid-growing community, and it is within the past few days we have flowered a fine plant of the richly coloured *Disa incarnata*. We have already figured two of the small-flowered Disas in these pages—*D. racemosa*, t. 356, and *D. graminæfolia*, t. 399—and the present species is equally beautiful. This charming plant was first discovered by Thunberg, now more than a century ago, but we are indebted to Mr. James O'Brien for having introduced it to this country in a living state, where we trust it will long continue to find many admirers. This species of course cannot be compared with the large-flowered kind, *D. grandiflora*, which was so well grown by Mr. Owen Thomas, at Chatsworth, when gardener to His Grace the Duke of Devonshire; also by Mr. Vincent, gardener to the Comte de Germiny, at Gouville, near Rouen, France. There, are, however, quite a host of the smaller-flowered Disas and many other terrestrial Orchids well deserving better attention than has hitherto been bestowed upon them. Take for example the very bright *Habenaria militaris*, so finely grown by Mr. White at the residence of Sir Trevor Lawrence, Bart.; the *Satyrium aureum* and other species so well grown and exhibited by Mr. Seeger, of Dulwich; and the *Orchis foliosa* which we have grown and exhibited ourselves—all proving that these terrestrial plants can be as well grown as the

epiphytal kinds if the "heart" only is in the work. The present plant was grown and flowered in the garden of A. H. Smee, Esq., The Grange, Carshalton, where so many of these gems of the Orchid world may be seen under the fostering care of Mr. Cummins.

Disa tripetaloides, according to the statement of its introducer, is a very free-growing plant and a profuse bloomer. It requires the same treatment as does *D. grandiflora* and *D. racemosa*, to which section of the genus this plant belongs. Many of our correspondents affirm to its withstanding several degrees of frost with impunity, but we are under the impression that it is not well to expose any plant to the very lowest temperature it will bear and live; we therefore prefer the temperate house or cool frame, for we cannot but think that the effect of frost upon this plant, if not sufficient to destroy life, would most assuredly rob it of its fresh, healthy appearance and pristine beauty. The flowers are creamy white or flushed with a tinge of flesh colour, prettily dotted with crimson, and they remain a very long time in full beauty.

AWARDS MADE BY THE ORCHID COMMITTEE *(continued from under Plate* 461*)*.

To Sir Wm. Marriott, an *Award of Merit* for *Lælio-Cattleya Marriottiana*, a cross between *L. flava* and *C. Skinneri*, having upright spikes of flowers, which upon first opening have a tinge of brown, but when fully developed are yellow suffused with pink.

To Messrs. Linden, of Brussels, an *Award of Merit* for *Odontoglossum Pescatorei Lindeniæ*, a handsome spotted form.

To Messrs. James Veitch and Sons, an *Award of Merit* for *Dendrobium Eurycles*, a cross between *D. lituiflorum* and *D. Wardianum*, which does not give such a magnificent result as we expected.

To Messrs Heath and Son, Cheltenham, an *Award of Merit* for *Cypripedium Swinburnei*.

To Sir Trevor Lawrence, Bart., a *Botanical Certificate* for *Masdevallia Wendlandiana*, a pretty little small-flowered species from Colombia, being white, and passing into cream at the tips.

To Sir Trevor Lawrence, Bart., a *Botanical Certificate* for *Bulbophyllum Sellemeanum*, a species having bright yellow flowers.

To C. J. Lucas, Esq., a *Cultural Commendation* for a fine-flowered plant of *Odontoglossum Cervantesii decorum*.

APRIL 19th. To Messrs. F. Sander and Co., a *First Class Certificate* for *Cattleya Burberryana*, a cross between *C. intricata* and *C. superba*, having flowers the shape of the last named, measuring some six inches across; sepals and petals white, flushed with pink, the middle lobe of the lip being dark crimson.

(Continued under Plate 463.*)*

J. Nugent Fitch del. et lith

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MAXILLARIA SANDERIANA .

MAXILLARIA SANDERIANA.

[Plate 463.]

Native of Peru.

Epiphytal. *Pseudobulbs* ovate, compressed, and of a deep green, bearing a single *leaf*, which is oblong, acute, somewhat leathery in texture, nearly a foot in length, and deep green. *Scape* about six inches high, issuing from the base of the pseudobulbs, sometimes decumbent, at other times erect, clothed with boat-shaped bracts, bearing a single large flower measuring five inches or more across. *Sepals* spreading, ovate, pure white, stained at the base with dark chocolate-brown, with some spots of the same colour immediately above the edge; *petals* much smaller than the sepals, ovate, acute, reflexed at the tips, white, but thickly spotted with chocolate in the basal half, leaving the upper portion pure white; *lip* erect, pouched, stained with deep chocolate at the base; the spreading front lobe creamy white.

Maxillaria Sanderiana, *Reichenbach fil., MS.; Reichenbachia*, 1st series, vol. i., t. 25. *Williams' Orchid Grower's Manual*, 6th edition, p. 637.

This is, without a doubt, one of the most handsome and attractive members of this genus, having for its affinities the fine *Maxillaria grandiflora* and *M. Lehmannii*, which, together with *M. venusta*, *M. luteo-alba*, *M. lepidota*, etc., serve to remove the genus *Maxillaria* from the oblivion into which it had fallen by the withdrawal from it of many fine species now found in the genera *Lycaste*, *Bifrenaria*, and some others, and which formerly were included with it. The plants left to represent the genus were not very attractive, but we have found many of the species, although lacking size and frequently wanting in the colour of their flowers, exceedingly interesting, and many of them highly fragrant. The present species, however, is one of the large-flowered kinds, and was discovered by Edward Klaboch in the mountains of Peru at some 4,000 feet elevation about nine or ten years ago. It first flowered in this country in the grand collection of Baron Schroeder, at The Dell, Egham, in 1885, under the care of Mr. Ballantine; but the specimen whose portrait we have the pleasure to lay before our readers, bloomed in our own collection in the Victoria and Paradise Nurseries, Upper Holloway, in the month of March last year.

Maxillaria Sanderiana is an evergreen plant and a robust grower, which, as it becomes established after its importation, blooms freely enough; there has, however, been a great deal of controversy as to its being a cool house or a hot house species, but as it was found at about 4,000 feet elevation, we cannot expect it to thrive with plants that are found growing at double that altitude. Moreover,

the plant has succeeded well with us in a temperature similar to that at the cool end of the Cattleya house. Its near allies, *M. grandiflora* and *M. Lehmannii*, thrive permanently in the cool house, being found at a greater altitude. This species does best in a pot or hanging earthenware basket, and the drainage should be perfect. The soil it requires is good brown peat fibre, mixed with an equal portion of sphagnum moss; this must be pressed firmly round the plant, and during its active growth a liberal amount of water is necessary both to its roots and overhead from the syringe. During its resting season we keep it drier and also cooler.

AWARDS MADE BY THE ORCHID COMMITTEE *(continued from under Plate* 462*)*.

To R. J. Measures, Esq., Cambridge Lodge, Camberwell, an *Award of Merit* for *Cypripedium Exul*, a pretty and distinct kind.

To Messrs. J. Veitch and Sons, an *Award of Merit* for *Cattleya Philo*, a cross between *C. iricolor* and *C. Mossiæ*, having the sepals and petals white, shaded with flesh, and faintly tinged with pale yellow; lip crimson-yellow on the disc, and with the border white.

To Messrs. F. Sander and Co., an *Award of Merit* for *Oncidium Gravesianum*, a pretty free-flowering plant belonging to the *O. crispum* section, having branched spikes, bearing many flowers which are bright yellow, bordered with rich brown.

To Messrs. F. Sander and Co., an *Award of Merit* for *Odontoglossum Wendlandianum*; a pretty plant resembling *O. blandum* somewhat.

MAY 3rd. To W. E. B. Farnham, Esq., Quorndon Lodge, Loughborough, a *First Class Certificate* for *Cattleya Mendelii*, Quorndon House variety, which had pure white flowers, except some slight markings of purple in the lip, which also had a stain of yellow towards the base.

To Messrs. F. Sander and Co., a *First Class Certificate* for *Cattleya Victoria Regina*, having flowers six inches across; the sepals and petals being deep rosy lilac, the lip rich crimson.

To Messrs. J. Veitch and Sons, a *First Class Certificate* for *Lælia Latona*, a hybrid between *L. cinnabarina* and *L. purpurata*, having charming flowers, the sepals and petals rich yellow, lip deep crimson.

To Norman C. Cookson, Esq., Wylam-on-Tyne, a *First Class Certificate* for *Lælio-Cattleya Phœbe*, a cross between *Cattleya Mossiæ* and *Lælia cinnabarina*, with flowers of a bright Indian-yellow, and a very deep crimson lip.

To Messrs. F. Sander and Co., an *Award of Merit* for *Phajus Sandersii*, the flowers being large and showy, measuring upwards of six inches across; sepals and petals a dull coppery red, lip three-lobed, front lobe very long, white, yellow at the base, crimson in the middle.

To Messrs. James Veitch and Sons, an *Award of Merit* for *Cattleya Philo-albiflora*, a cross between *C. iricolor* and *C. Mossiæ*, having pure white petals.

(Continued under Plate 464.*)*

J.Nugent Fitch del.et lith.

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CALANTHE OWENIANA.

CALANTHE VESTITA OWENIANA.

[Plate 464.]

Garden Hybrid.

Terrestrial. *Pseudobulbs* conical, fleshy, bluntly angulate, deciduous; from four to six inches in height. *Leaves* thin and membranaceous in texture, plicate. *Scape* sub-erect, issuing from near the base of the pseudobulb, clothed with large ovate lanceolate bracts, from eighteen inches to three feet in length, and bearing a bold raceme of highly coloured flowers, which measure between two and three inches across. The *sepals* and *petals* are nearly equal, spreading, broadly lanceolate, acute; the former white, suffused with rose, the latter of a deeper rose colour; *lip* flat and spreading, three-lobed, the side lobes deeply-cleft, very broad, middle lobe cleft in front, the colour being of a bright rosy crimson, with a large white centre. *Spur* filiform, incurved, shorter than the lip, greenish.

Calanthe vestita Oweniana, *Williams, supra.*

This is a very beautiful and distinct hybrid of our own raising, a cross between *Calanthe vestita* and *C. Veitchii*, the last named being one of the first hybrid Orchids raised by the late Mr. Dominy, when in the service of Messrs. J. Veitch and Sons; and the other parent which is frequently named *C. vestita lutea* was discovered by Dr. Wallich, in Tavoy, now nearly seventy years ago. There have been many varieties raised of these deciduous Calanthes, but we do not recollect any that resemble this one, which we have dedicated to G. D. Owen, Esq., of Rotherham, an ardent lover of Orchids.

Calanthe Oweniana belongs to the deciduous section of this genus, which lose their leaves shortly before the flowers expand, a circumstance we have heard decried by many; but these plants, when arranged with Maiden-hair Ferns, or with Palms, form an admirable group at the very dullest time of the year. These plants used to be largely grown in the London district a few years back, but so bad has our atmosphere become, that Calanthes now are never seen; outside London, however, in the country, where the air is more pure, they still maintain a grand display. These plants will soon be ready for starting into growth, when all the old soil may be shaken away, and then re-potted. The pots must be well drained, and the soil consist of good turfy light loam, peat, and dry cow manure, the latter to be only in small quantities. When this is properly mixed together pot the bulbs, but do not elevate them above the pot's rim, as is done with the majority of Orchids; the bulbs may then be placed in a light place in the East Indian house, and as the sun gets brighter

and more power, shade the young growths during the middle of the day. When starting into growth, and for a few weeks after, water must be given very carefully; but after the roots have spread, larger quantities may be given, and also a nice moist atmosphere kept until the growths are made up, when less moisture in every way will be requisite. They must not be allowed to become dry, because at this season the spikes of bloom will begin to push up; yet the drought can be so arranged that the leaves can all be got away before the flowers open. This is much better than having some half-decayed leaves upon the plant or plants when arranging them up for decorative purposes.

AWARDS MADE BY THE ORCHID COMMITTEE *(continued from under Plate* 463*).*

To Messrs. Charlesworth and Shuttleworth, Bradford, and Clapham Road, a *Botanical Certificate* for *Eriopsis biloba,* recently figured in these pages.

To Messrs. F. Sander and Co. a *Botanical Certificate* for *Cynorchis flexuosa.*

J. Nugent Fitch del. et lith.

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ODONTOGLOSSUM EDWARDII .

ODONTOGLOSSUM EDWARDI.

[Plate 465.]

Native of Ecuador.

Epiphytal. *Pseudobulbs* ovoid, somewhat compressed, between four and five inches long, stout, deep green, usually bearing a pair of leaves, which are strap-shaped, tapering to a sharp point at the apex, folded at the base, keeled beneath, and of the same deep green as the pseudobulbs. *Scape* springing from the base of the fully formed growth, rising to about four feet in height, paniculate and many-flowered. *Flowers* somewhat small, of a dark purplish hue, and deliciously fragrant; *sepals* and *petals* about equal, spreading, oblong ovate, prettily waved and undulated at the margins; *lip* shorter than the sepals, tongue-shaped, bearing a fleshy crest, which is deep yellow; in some varieties this is slightly paler. *Column* short, narrowly winged.

Odontoglossum Edwardi, *Reichenbach fil*, *Gardeners' Chronicle*, x., p. 74. *Botanical Magazine*, t. 6771. *L'Orchidophile*, 1891, p. 241. *Reichenbachia*, i., t. 26. *Williams' Orchid Grower's Manual*, 6th ed., p. 439.

This very handsome and distinct Odontoglossum was first brought to our notice by the celebrated traveller and collector, Edward Klaboch, after whom it is named. It first flowered in this country in 1880, in the famous collection of the late H. J. Buchan, Esq., of Southampton, then under the care of Mr. Osborn; since that time it has become more frequent in collections, but very little variety has occurred amongst the plants that have flowered. The plant known as *Odontoglossum ioplocon*, though seen but once by us, appears to be but a variety of *O. Edwardi*; its striking colour, however, induces us to hope that some larger-flowered form of the same hue yet lurks in the Andes of Ecuador to reward the labours of an ardent searcher, and to add fresh lustre to the genus *Odontoglossum*. The plant here depicted flowered in our own collection, in the Victoria and Paradise Nurseries, Upper Holloway. The deep colour of the sepals and petals, and the rich yellow crest upon the lip, mark it as an excellent variety of the species now under consideration.

Odontoglossum Edwardi is a robust-growing evergreen plant, making pseudo-bulbs and leaves of about the same deep green colour, and producing a strong branching spike of bloom; the individual flowers, however, are small, measuring only about an inch across, but they are numerous, and yield a delicious perfume, whilst the colour is rich purplish mauve, which renders it so conspicuous and distinct from all its kindred. We are unable to state at what altitude it was found, but we presume that it grows at a considerable elevation above the level of the sea, for we have found it to thrive best when treated quite cool, and we

therefore advise our readers to keep it at the coolest end of the Odontoglossum house, potting it in good upland peat fibre, mixed with some fresh and growing sphagnum moss. The pots should be well drained, for it likes an abundance of water to the roots when growing, and means should always be provided for this to pass away quickly, and a nice moist atmosphere should be maintained; in fact the plant should never be allowed to become quite dry at any season, although, as a matter of course, very much less water is necessary in the winter months than is required during the spring and summer. Some slight syringing will also be advantageous during the dry, hot weather, but it should be done very carefully with a fine rose, and just enough water should be used as will fall upon the plants in the form of a gentle dew.

THE TEMPLE SHOW.

At this exhibition, held in the last week of May, many fine plants were to be seen, although there was a great lack of novelty. Amongst the plants in the collection of Baron Sir J. Henry Schroeder was a fine plant of the pure white *Sobralia macrantha*, called *Kienastiana*. Another grand specimen in this collection was *Cœlogyne Dayana*, with twenty-four spikes about three feet in length, bearing some thirty-six flowers upon each raceme, or nearly eight hundred flowers in all; it was very fine. Another remarkable and fine plant was named *Odontoglossum crispum apiatum*, having a very large blotch of bright chestnut-brown on each segment, accompanied by two smaller spots of the same colour, the sepals being tinted with violet. This, I think, is the variety named *Duvali*, and figured by M. Godefroy, of Paris, before the name of *apiatum* was given it by Reichenbach. However, it is one of the grandest forms of *O. crispum*; and so also is the variety *Sanderianum*, but somewhat inferior to *apiatum* or *Duvali*. *Vanda teres* and *Cattleya Skinneri* were also remarkably fine in the Baron's collection, as also were *Dendrobium nobile nobilius* and a nice *Cattleya gigas Sanderiana*, rich in colour and having many blooms. Masdevallias, too, were very fine, particularly *M. Veitchii*, *M. Denisonii*, and *M. Gairiana*, the group being well set up, while the health of the specimens was highly creditable to the efforts of the gardener, Mr. Ballantine. In the next lot, which was set up by Mr. White, who has charge of Sir Trevor Lawrence's fine collection, were many plants of great reputation, amongst them being a remarkably well-flowered *Cattleya Wagenerii*, with its pure white blooms stained with yellow in the throat; also a very fine *Cattleya Mendelii*, and a very richly-coloured *Lælia tenebrosa*. There were also some fine flowers of the rare *Dendrobium polyphlebium*, and *D. Parishii albens*, which has white sepals and petals, and a rosy lip blotched at the base with two black eye-like spots. *Cochlioda Noetzliana*, with cinnabar flowers, was also shown in several examples, and it bids fair to be an excellent plant; but, of course, it is too recent in cultivation to show its full beauty.

(Continued under Plate 466.*)*

CATTLEYA TRIANÆ REGINÆ.

[Plate 466].

Native of U.S. Colombia.

Epiphytal. *Pseudobulbs* stem-like, clavate, becoming furrowed with age, about a foot in height, monophyllous. *Leaves* strap-shaped, coriaceous in texture, some eight inches in length, and rich deep green in colour. *Scape* stout, erect, issuing from an oblong compressed sheath, few-flowered. *Flowers* large and spreading, measuring some six inches across; the *sepals* and *petals* are of a pure white, the petals much the broader of the two, undulated at the margins; *lip* three-lobed, the lateral lobes convolute, the front lobe obovate and well spread open, prettily frilled and undulated at the margin, which is continued quite round, colour a soft and pleasing shade of purplish magenta, leaving a broad marginal border of pure white, the throat being shaded with pale yellow. *Column* club-shaped, slightly winged.

Cattleya Trianæ, *Linden and Reichenbach fil,* in *Botanische Zeitung*, xviii., p. 74. *Orchid Album*, i., t. 45. *The Garden*, xxii., t. 346. *Williams' Orchid Grower's Manual*, 6th ed., p. 201.

Cattleya Trianæ Reginæ, *supra.*

We saw the plant of this beautiful section of the *labiata* group when it first flowered with Mr. Sigismund Rucker, in his famous garden at Wandsworth, and which Lindley named *Cattleya quadricolor*, without describing it. It was afterwards specified by Reichenbach, however, under the name it now bears, but neither them nor the growers could have formed the slightest idea that it would break out into so many splendid forms as now decorate our houses, amongst which the present variety does not stand the least. True, it cannot equal *C. Trianæ Dodgsonii*, figured in Vol. vi., t. 249, nor *C. Trianæ Russelliana*, Vol. v., t. 219, for depth and richness of colouring, but it unites with the purity of the variety *alba*, a lip as gay as can be seen in any form. The plant we have here figured flowered with us in our own collection at the Victoria and Paradise Nurseries, Upper Holloway, in the early part of the present year. It has now passed into the grand collection of the Honourable F. L. Ames, of Boston, Massachusetts. We consider it one of the most chaste and beautiful varieties that *C. Trianæ* has given us.

Cattleya Trianæ Reginæ is a neat-growing evergreen plant, a free grower, and also a free-blooming kind. Like all the varieties to which we have directed the attention of our readers from time to time, it requires to be well drained, and to be firmly potted in a mixture of good brown peat fibre from which all the earthy

matter has been beaten, and some chopped sphagnum moss. It also requires exactly the same kindly treatment as do the other varieties of the great *Labiata* section.

The Temple Show *(continued from under Plate 465).*

The pure white large-flowered form of *Cattleya intermedia*, to which Reichenbach gave the name of *Parthenia*, was to be seen in all its purity, and it is far more worthy of the name than the hybrid Cattleya which afterwards usurped this cognomen. *Epidendrum O'Brienianum* was another plant worthy of notice, its bright cherry-red flowers being very showy. *Cypripedium Rothschildianum* was very fine, as also were some Cattleyas; *Sobralia macrantha* with its fine large flowers, and *Vanda teres* were also profusely bloomed. Indeed, the whole collection was in splendid condition, and the plants reflected the highest credit upon Mr. White, who has spared no pains in the management of these plants. Another fine group of plants was put up by C. J. Lucas, Esq., Warnham Court, Horsham, which, although not of such great intrinsic value as the two previously named, were most superbly grown, and Mr. Duncan, the gardener, well deserves the highest encomiums for their excellence. Amongst them were one or two things not found in any other group. *Epidendrum Claesianum* is one of the many forms of the variable *E. Schomburgkii*, belonging to the tenth section (*Amphiglottium*), as established by Lindley, which are quite destitute of pseudobulbs, but have long leafy stems clothed with distichous fleshy leaves and terminal flower spikes, the flowers of the plant in question being of a light orange colour. This species would appear to be widely distributed, and consequently it varies much. There were also two varieties of *Grammatophyllum Fenzlianum* shown in the same group, having spikes of bloom about four feet in height, and they appeared to be the forms known as *Meusuresianum* and *Seegerianum*, the flowers being numerous and beautiful in both varieties. Several Masdevallias of the *Chimæra* section were wondrously fine and beautiful; indeed, the whole group was replete with fine flowers. The most notable flowers in the group staged by F. Wigan, Esq., of Clare Lawn, Sheen, were *Brassavola Digbyana*, with finely-fringed flowers, and the only specimen in the show; also a very nice example of the Fox-brush Aërides, *A. Fieldingii*, and a very fine form of *Cypripedium Curtisii*. The whole collection appeared in the best of health, and reflected great credit upon the grower, Mr. Young. A grand *Vanda teres*, bearing eight flowers on the spike, was sent by Mr. Wythes from the celebrated gardens at Syon House. In addition to these, the various trade collections throughout the country were fully represented.—*W. H. G.*

. . . . Fitch del et lith .

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CYMBIDIUM EBURNEUM .

CYMBIDIUM EBURNEUM.

[Plate 467.]

Native of Northern India.

Terrestrial. *Pseudobulbs* ovate, covered by the sheathing bases of the leaves, which are numerous, narrowly sword shaped, bilobed at the apex, arching, and from one to two feet in length. *Peduncle* erect, shorter than the leaves, clothed below with several acute bracts, and usually bearing a single flower; sometimes, however, two blooms are produced. *Flowers* large, thick, waxy, and very fragrant, some three inches-and-a-half across, clear ivory-white, as is every other portion of the flower, saving a few specks of purple on the lip, and the raised fleshy plates on the lip which are deep yellow; *sepals* and *petals* oblong-lanceolate, spreading, thick and waxy in texture; *lip* three lobed, the lateral lobes incurved, middle lobe somewhat triangular, bilobed in front and crisped at the edges, bearing some raised fleshy plates on the disc. *Column* clavate, narrowly winged, white, slightly stained with rosy purple in front.

Cymbidium eburneum, *Lindley, Botanical Register*, 1847, t. 67. *Id. Journal of Linnæan Society*, iii., p. 28. *Paxton's Magazine of Botany*, xv., p. 145. *Botanical Magazine*, t. 5126. *Select Orchidaceous Plants*, i., t. 27. *Jennings' Orchids*, t. 16. *Hook. fil., Flora of British India*, vi., p. 11. *Williams' Orchid Grower's Manual*, 6th ed., p. 232.

This chaste and beautiful plant was found many years ago by the celebrated traveller, Griffith, but its deliciously fragrant flowers were first seen with Messrs. Loddiges, of Hackney, in 1847. From this time forward, although the plant grew well, it remained very scarce and expensive until 1875, when we imported a fine batch of it in splendid condition from India, the collector of our plants sending us word that in the cool season their leaves were broken down, and that sometimes they had snow upon them; but when the warm weather returned the Cymbidiums came up again and flowered profusely, reminding him of clumps of great white Tulips. Before this time the plant had been subjected to the hottest possible treatment; but we had to become teachers to the people of the proper method of ensuring a crop of bloom, and the plants imported by us, and shortly afterwards by other firms, ensured the popularity of the species, which had until 1875 been in a waning condition through its flowering so seldom.

The plant here figured is one of the batch before mentioned, and which we imported ourselves when the plant was rare and but little understood. Many of these plants were established under a north wall in the open air in the summer of 1875, and this is one of those which flowered in our nursery, Upper Holloway,

in the early part of last season. Previous to this importation being received it had only produced single-flowered peduncles, but many of the imported plants had the remains of twin flowers, and one stem bore evidence of having produced three blooms. This fact produced much disturbance in the minds of the Orchid growers of that time, they knowing *Cymbidium eburneum* as a single-flowered species only.

Cymbidium eburneum is a sturdy and compact-growing plant, attaining to about two feet or rather more in height, and producing an abundance of its narrow distichous dark green leaves, which have an elegant arching habit, and thus render the plant quite ornamental even when devoid of flowers; but when the beautiful ivory-white blossoms are in evidence, it has few rivals that can successfully compete with it. Much has been said and written about this species and its requirements, but nearly all that was formerly advocated as necessary for this plant is now open to objections, as nearly all the growers in the early days erred in giving it too much heat, and in keeping it too dry through the resting season. In potting it should be remembered that it is a plant which makes stout and fleshy roots, and in great numbers, and it requires plenty of space to allow the roots to ramble. The pots, too, must be well drained to ensure sweetness, which can never be attained if water is allowed to stagnate in the pots. The soil should consist of good turfy loam, three parts, and fibrous peat, sphagnum moss, and sharp Bedfordshire sand, one part of each, and they should be potted as ordinary fine-leaved plants, leaving sufficient space for a good supply of water. The Odontoglossum house will suit it admirably during the greater part of the season, but as it begins to move, about the beginning of the year it may be removed into the Cattleya house; treated in this manner the plants will not be subject to the spot on their leaves, which used to be such a great disfigurement to them.

Cattleya Mossiæ Reineckiana.—The fine form of this variety figured by us, plate 461 of the present volume, was shown in splendid condition by G. Hardy, Esq., of Pickering Lodge, Timperley, Cheshire, at the Manchester Orchid Exhibition, held in Whit-week, this year. The plant was in perfect health, reflecting much credit upon the gardener, Mr. Holmes, and was bearing sixteen of its grand and beautiful blossoms. We were much pleased to see that the judges awarded it the Williams' Memorial Medal and £5 for the best *bonâ-fide* specimen Orchid in the Show.—H. W.

[illegible] Fitch del et lith.

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CATTLEYA AUREA STATTERIANA.

CATTLEYA DOWIANA AUREA STATTERIANA.

[Plate 468].

Native of U.S. Colombia.

Epiphytal. *Pseudobulbs* stem-like, clavate, furrowed, bearing a single leaf, which is thick and coriaceous in texture, nearly a foot in length, and deep green. *Flowers* very large; *sepals* and *petals* of a soft creamy white, the latter much the broader, prettily toothed and waved at the edges; *lip* three-lobed, large and full. the side lobes encircling the column, the front lobe emarginate and beautifully undulated round the margin, intense deep velvety crimson-magenta, having a few bold streaks of golden yellow running into it, and at the sides near the throat is a large blotch of tawny orange-yellow.

Cattleya Dowiana aurea Statteriana, *supra.*

The illustration of the above-named plant affords another example of the beautiful forms which *Cattleya Dowiana aurea* breaks into—the ordinary plant which we have already figured in Vol. ii., t. 84, of the Album. This plant was originally found by one of M. Linden's plant collectors in Colombia, near Frontino, in the state of Antioquia, which we are told by the late B. Roezl is upwards of 600 miles from the spot in Costa Rica where Warscewicz first detected *C. Dowiana* in the year 1850. *C. Dowiana aurea* is a geographical variety of that plant. *C. Dowiana* appears to be farther removed from the general range of Cattleyas, and it appears to exist in its native home in very limited numbers; it was found in 1850, whilst *C. Dowiana aurea* did not make its *début* until about eighteen years afterwards.

The very fine variety here figured was flowered in the grand collection of plants brought together by J. Statter, Esq., Whitefield, Manchester, after whom it is named, and which are under the skilful management of Mr. Johnston. This plant differs much from the variety of *Cattleya Dowiana aurea* figured by us as *C. Dowiana aurea (Young's var.)* on t. 432 of the last volume, for grand as was that form, this is far more distinct from the typical plant.

Cattleya Dowiana aurea Statteriana is a stout-growing and robust evergreen plant, and one which requires exactly the same treatment as *C. Dowiana aurea*—that is, it should be kept quiet and cool from the time that the growth is made up after the blooms are past, and not to allow the plant to feel any excitement until the following spring. If this plan is adopted, *C. Dowiana aurea* will be found to produce flowers as freely and regularly as does the old favourite, *C. Mossiæ*; but if the plant is allowed to grow in the autumn, as a matter of course it cannot produce growth

strong enough to flower. We have so often given instructions as to potting, and the soil to use and how to use it, that it need not be repeated here; but we will just add a reminder, that Cattleyas enjoy a nice roomy house, and an abundance of fresh air. Where this is accorded, insects of all sorts are less liable to attack them, but they should be kept scrupulously clean.

Lælia grandis tenebrosa.—This plant seems to be flowering freely with many growers this season, and it appears to vary considerably in different plants. Amongst many flowers which we have received from time to time, one from the collection of G. Hardy, Esq., Timperley, Cheshire, has been the leading variety, but a flower recently received from the Rev. E. Handley's collection at Bath has at last placed Mr. Hardy's plant into the second position. The sepals and petals are broad, and of a deep chestnut-brown in colour, and the large lip is heavily blotched with blackish maroon, having veins of the same rich dark colour extending to the front. These are certainly the finest coloured varieties that we have yet seen. We have also received a fine variety from M. Le Comte de Germiny, Chateau de Gouville, France.—W. H. G.

Cattleyas from Llandudno.—We recently received from the collection of Joseph Broome, Esq., Sunny Hill, Llandudno, two of the most magnificent Cattleya flowers we have ever seen. The first was a grand bloom of *Cattleya gigas Sanderiana*, measuring fully nine inches across. The sepals and petals were broad, forming a handsome and well-shaped flower, of a deep rosy purple in colour, the petals being prettily frilled at the edges; lip large and spreading, beautifully undulated, and wholly of a deep rich violet-purple, the sides of the throat having the two characteristic rich yellow eye-like spots, which render all the varieties known by the name of *gigas* so telling and conspicuous. The other was a magnificent flower of the well-known old favourite, *Cattleya Mossiæ*. We have only seen one flower that at all approached it, and that was named "Mrs. Smee." Mr. Broome's flower had a particularly happy deportment which added materially to its beauty. The sepals and petals were of good substance, and deep rose in colour, whilst the large frilled lip was wholly of a rich crimson-magenta, with darker lines, and it also had a marginal border of lilac or mauve. The tawny orange markings peculiar to this form of the *labiata* section were continued along the sides a considerable distance. In the two flowers there was no point in which to pick out a blemish.—W. H. G.

CATTLEYA CITRINA

CATTLEYA CITRINA.

[Plate 469.]

Native of Mexico.

Epiphytal. *Pseudobulbs* ovoid, clothed with thin white sheathing scales. *Leaves* one to three in number, and from three to seven inches in length; these are strap-shaped and acute, glaucous green in colour, and persistent. *Scape* pendulous, one to two-flowered, the latter number being, however, rarely produced, and the scape may be said to produce a single flower only, which is large, thick and fleshy in texture, of a charming colour, and yielding an exquisite fragrance. *Sepals* and *petals* nearly equal, the petals somewhat the broader, of a deep rich golden yellow; *lip* obscurely three-lobed, the side lobes rolled in a revolute manner over the triquetral column, front lobe spread open, undulated at the edge, having a marginal border of white; the other part of the lip is of the same colour as the sepals and petals, with some darker veinings.

Cattleya citrina, *Lindley's Collection of Botanical Subjects*, t. 37. *Botanical Magazine*, t. 3742. *Hooker's First Century of Orchids*, t. 31. *Flore des Serres*, xvi., t. 368, 389. *Pescatorea*, t. 9. *Select Orchidaceous Plants*, iii., t. 18. *Reichenbachia*, i., t. 20. *The Garden*, xxii., p. 274. *Williams' Orchid Grower's Manual*, 6th edition, p. 177.

Sobralia citrina, *La Llave et Lex.*,

Epidendrum citrinum, *Reichenbach, Xenia Orchidacea*, p. 32.

Cattleya Karwinskii, *Martius*,

This very beautiful plant is the only species of *Cattleya* which has hitherto been found in the Mexican territory, although the allied genus, *Lælia*, is found in great profusion in that country. It is somewhat wide-spread in the State of Oaxaca, which is largely inhabited by Indians, and occupies considerable elevations in the mountains, usually being found at between 6,000 and 8,000 feet. The ancient name of this sweet-scented Mexican flower was *Corticoatzontecoxochitl*, and although the pronunciation of this language of the natives appears to be lost, yet the flower still emits the same delicious perfume as it did, it is presumed, a few centuries back. The plant was introduced to this country in the first place by the Horticultural Society of London about seventy years ago—long before it had any claim to be called a Royal Society—but it was not until about fifteen years afterwards that its beautiful blooms were seen, and this was in the collection of plants gathered together at Woburn Abbey by the then Duke of Bedford, a great patron of horticulture. After this time, M. Linden, of Brussels, appears to have

been the great factor in the introduction of this species, and indeed it was from his establishment that we first became cognisant of the species. The plate here given of *Cattleya citrina* was drawn by our artist, Miss Gertrude Hamilton, from a plant which flowered amongst many others in our own collection at the Victoria and Paradise Nurseries in the spring of the present season; it represents a very good coloured form of the species, and a variety in which the white band on the front lobe of the lip is well defined.

Cattleya citrina is a beautiful dwarf plant, having glaucous persistent leaves and large fleshy fragrant flowers, which last a long time in full perfection. In its native country we are told that it is found growing upon the under sides of the branches of trees, and hence the best plan is to fasten it upon a block of wood (willow-wood we prefer) with the growing part pointing downwards, standing, as it were, upon its head. We have frequently seen it placed in an upright position, but all attempts to so grow it have ended in its death; in fact, the plant would appear to be a somewhat refractory subject even when treated in the best manner. Few persons can point to their plants and say that they have bloomed them half-a-dozen years in succession, but in some instances this has been asserted with a good deal of truth, and when such is the case, no more beautiful and pleasing flower can be found. Some people grow this plant in shallow pans, but we greatly prefer the block system of culture. It should thrive well in the Cattleya house during the summer months, treated to a somewhat shady position and supplied with a large quantity of water; but in the winter months it should be kept cool and dry, and if kept in the cool house during this time plenty of moisture will be available from the atmosphere.

LÆLIA ELEGANS LEUCOTATA.—This is one of the most chaste and elegant flowers that we know of, and we were certainly quite surprised at its most immaculate beauty after seeing some of the darkest and finest varieties of this species in the same establishment. The flowers are rather small at present, which may be accounted for by the plant being young, but they are wholly of the purest white, having the deeply-clawed lip of the typical plant. We saw this rare and valuable gem quite recently in the collection of R. H. Measures, Esq., at The Woodlands, Streatham, where it is held in great estimation.—W. H. G.

ONCIDIUM PHYMATOCHILUM

ONCIDIUM PHYMATOCHILUM.

[Plate 470.]

Native of Brazil.

Epiphytal. *Pseudobulbs* broadly fusiform, somewhat compressed, about five inches long, of a ferrugineous hue, clothed at the base with several large sheathing scales, and bearing upon the apex a single large leaf, which is obovate, lanceolate, about a foot in length, and some three inches in breadth, striated on the upper side, strongly veined beneath. *Scape* erect, rising from the base of the pseudobulb, paniculate and many-flowered. *Sepals* and *petals* nearly equal, slightly twisted, linear acuminate, greenish yellow, spotted and dotted with deep orange-red, dull brown on the reverse side; *lip* shorter than the sepals, trowel-shaped, the side lobes small, forming rounded ear-like protuberances, the front lobe white, with a reflexed acuminate point, crest triangular, bearing many teeth, tubercles yellow, dotted with orange.

Oncidium phymatochilum, *Lindley, Gardeners' Chronicle*, 1848, p. 139. *Paxton's Flower Garden*, p. 78, t. 18. *Lindley, Folia Orchidacea*, 191, p. 54. *Pescatorea*, t. 35. *Botanical Magazine*, t. 5214. *Flore des Serres*, xxiii., t. 2465. *Williams' Orchid Grower's Manual*, 6th edition, p. 498.

The plant here figured belongs to a family which exists in large numbers throughout the length and breadth of Tropical America, as well as in the West Indian Islands, many of the kinds growing in the mountain regions, often at great elevations, along with their near relatives the Odontoglossums. The species which we now have under consideration was for a long time supposed to be a native of some part of Mexico, and the certainty of its habitat was not cleared up until M. Linden, of Brussels, figured it in his *Pescatorea* from a plant that had been collected in the neighbourhood of Nova Friburgo, in Brazil, by M. Pinel, and thus set at rest the dispute. It is a very elegant and distinct kind, and the present figure was drawn by Miss G. Hamilton from a plant which flowered in the spring of the present year in the Victoria and Paradise Nurseries, and it well represents the species.

Oncidium phymatochilum is an evergreen plant of a very distinct character. It is not a new species, for it was known in our gardens about fifty years ago, but the early collectors failed to notify the spot where it had been collected. It has somewhat compressed pseudobulbs, which bear upon their apex a single leathery leaf, which is a foot or more in length, and three inches in breadth. The scape is erect, arching, several feet in length, paniculate, and the flowers are numerous, the sepals and petals being nearly equal, linear, reflexed, pale greenish yellow, spotted on the face with deep orange-red. The lip is white, spotted with red, and having at the

base a yellow crest. The plant has been termed a hard one to cultivate successfully for any length of time, and we think perhaps this has been from the want of having it well drained, for we do not think it likes much soil about its roots, neither does it thrive if any water is allowed to lie about it. For this reason we must say that we have seen this plant doing best upon a block of wood, although we have grown it for years under pot culture, using for it somewhat small pots, well drained, and for soil, good upland peat fibre mixed with chopped sphagnum moss. It thrives in the cool end of the Cattleya house, with a nice moist atmosphere when growing, but we cannot say that we have found it to like watering overhead from the syringe. The sunshine is quite genial to it when not too strong, but at these times a thin shade should always be in readiness to put over it. When growing, water may be freely given, provided the drainage is kept in good open order, so that it can quickly percolate away. In the resting season, although much less moisture is necessary to its well-being, the surroundings must never be allowed to become dry enough to shrivel the bulbs, for it is a very bad plant to recover and to bring again into good health if allowed to shrivel up through over drying. If grown upon wood, it requires extra care to bring it safely through the resting season.

A Gigantic Cattleya (*Cattleya gigas Sanderiana*).—This is a grand form which we received from Mr. Holmes, gardener to G. Hardy, Esq., Pickering Lodge, Timperley, Cheshire. It measured ten inches across the petals, which were prettily frilled, the lip being some four inches long and three inches broad, and of an intense rich velvety crimson, with two large yellow eye-like spots beside the throat. The sepals and petals were of a rich rosy purple. It is the largest Cattleya that has ever come under our notice.—W. H. G.

Cypripedium callosum Sanderæ.—This is a superb novelty now flowering with R. H. Measures, Esq., The Woodlands, Streatham, in his rich collection of these Slipper Orchids. It is a very graceful flower, its depressed petals giving it a very elegant and distinct appearance; these, as well as the large dorsal sepal, are pure white, having the veins of a bright green. It is very singular that so many of our good Orchids develop these albino forms, which are highly appreciated by the owner of this grand collection of Cypripediums.—W. H. G.

CYMBIDIUM LOWIANUM

CYMBIDIUM LOWIANUM.

[Plate 471.]

Native of Burmah.

Terrestrial. *Pseudobulbs* oblong, somewhat compressed, clothed with the sheathing bases of the leaves, which are ligulate acute, some two or three feet in length, keeled on the under side, and deep green. *Spike* long and drooping from the weight of the large raceme of flowers which it bears, individual flowers about four inches across. *Sepals* and *petals* of a soft yellowish green, having several sepia-brown lines running through their entire length, the sepals a little larger than the petals, keeled behind; *lip* three-lobed, the side lobes erect, standing up to, but not enclosing the column, greenish yellow, the front lobe somewhat deltoid, slightly undulated on the edge, deep purplish maroon, with a white marginal border, base of the lip white, the raised fleshy plates on the disc being stained with purple, and the face of the column also spotted with reddish purple.

Cymbidium Lowianum, *Reichenbach*, *Gardeners' Chronicle*, n.s., xi., p. 404, fig. 56. *Floral Magazine*, n.s., t. 353. *Williams' Orchid Grower's Manual*, 6th edition, p. 234.

This is one of the most striking Orchids that we know. It was introduced from Burmah by the late Mr. Stuart Low, of the Clapton Nurseries, through his collector Boxall some sixteen years ago. Two years afterwards it flowered for the first time in Europe with Mr. Low, and was shown before the Royal Horticultural Society on March 11th, 1879, receiving a First Class Certificate, which it assuredly deserved. It was after this that Reichenbach raised it to specific rank, but upon its first introduction, he having to describe it from dried unsatisfactory materials, he had called it *Cymbidium giganteum Lowianum*; he had, however, the opportunity afterwards of examining living examples, and thus he saw the distinctions which could not be perceived in the dried flowers. Some botanists quite ignore the living examples, and are thus led into error. *C. Lowianum*, *C. giganteum*, *C. Traceyanum*, and the plant called *C. Hookerianum* by Reichenbach in 1866, but which has been since put with *C. grandiflorum*, of Griffith, all appear to make a distinct and very natural group of the genus, but we cannot admit of the propriety of lumping them together as one species, at least while we recognise specific names. Our plate was prepared from a plant in our own collection which was bearing ten spikes, the flowers in the aggregate amounting to 364 which was more than we had seen upon any other specimen this season, although we have seen this number far exceeded by the plants in the collection of R. H. Measures, Esq.,

of The Woodlands, Streatham, and by specimens in the collection of Baron Sir Henry Schroeder, of The Dell, Egham, and others.

Cymbidium Lowianum is a fine strong-growing evergreen plant, producing long spikes of bloom very freely, each bearing from twenty to thirty flowers. We have been told that some plants yield as many as forty and fifty upon a single spike, but we have invariably noticed that where the greatest numbers have been recorded, they have been of such poor varieties as not to have been worthy of the name *Lowianum*. The plant being of strong growth and of large rooting proclivities, it requires ample room for its roots to ramble. Drain the pots well, placing above the drainage material a good layer of sphagnum moss, and for soil use good fibrous peat and light turfy loam, in the proportion of two parts of the latter to one of the former, the whole to be chopped up somewhat roughly with the spade; some sharp sand can also be used during the operation of potting. Do not pot this plant upon a raised mound of soil, but rather pot it far enough below the pot's rim so as to enable one to administer a good supply of water to the roots at one time, for these plants require a quantity of moisture during the growing season, as well as light sprinklings overhead from the syringe. During the resting season they must be kept fairly moist, and at no time of the year must the soil be allowed to become dry, for in the winter, sometimes early in the month of December, the spikes will begin to push up, continuing to grow till the month of February, or even later; it would therefore not answer to keep the plants dry, but during these dull months the syringe may be laid on one side. The flowers last fully four or five months in beauty after they are open. On account of these plants being such robust growers, many persons have been induced to feed them with liquid manure, and in many instances we have observed the ill effects produced by this course of treatment; we therefore strongly urge our readers not to be led away by any specious argument in its favour. When growing, the plant likes the temperature of the Cattleya house, with a nice moist atmosphere, but when not growing, a temperature of 50° will be ample, but with a drier air.

Cattleya Mossiæ Hardyæ.—This plant flowered last June with Mr. Hardy, in his grand collection of plants of this genus, and it is a perfect gem. The flowers are large, and as beautiful as *Cattleya Wageneri*, which it much resembles, being wholly of the purest white, saving a shade of orange yellow in the throat; the front lobe is tinged with soft heliotrope, which gives it a pleasing and distinct appearance. It is at once a valuable and desirable addition to the many varieties of Cattleya now in cultivation.—W. H. G.

CRANTZICEPHALUS GRANDIFLORUS

ORNITHOCEPHALUS GRANDIFLORUS.

[Plate 472.]

Native of the Organ Mountains, Brazil.

Epiphytal. *Pseudobulbs* very small, having several sheathing dark green leaves, arranged in a distichous manner; these are oblong obtuse, and from three to six inches in length. *Scape* rising from the axil of the leaf, some six to eight inches long, arching, bearing a many-flowered raceme, the individual flowers slightly less than an inch across. *Sepals* and *petals* similar, but the lateral ones slightly smaller and reflexed, pure white, blotched with bright emerald-green at the base; *lip* somewhat rounded, saccate, keeled beneath, clawed, the front lobe crisp, white in front, green behind.

Ornithocephalus grandiflorus, *Lindley, Annals Society Natural History*, iv., p. 383. *Reichenbach, Walper's Annales Botanices Systematicæ*, vi., p. 493. *Ibid, Gardeners' Chronicle*, xviii., p. 168. *Belgique horticole*, 1884, p. 89.

The plant here represented is a member of a small family of Orchids containing about twenty species, established by Sir William Hooker many years ago, and of which sundry small-flowered kinds have from time to time appeared in cultivation. They have, however, quickly disappeared, because there are very few collections where these small-flowered kinds are appreciated, one striking exception being the collection at Burford Lodge, the residence of Sir Trevor Lawrence, Bart.; here every species, be it small-flowered or gay-coloured, receives as much care and attention from Mr. White, the gardener, as from his employer, who cherishes them with the same love and consideration as the more showy large-flowered species and varieties. The present plate was drawn from a plant that flowered in our own collection during the month of May in the present year. It is a most elegant and charming species, and although it is not a plant which has been seen much in cultivation except during the last few years, it has long been known to science, having been found by Gardner in Southern Brazil nearly sixty years ago.

Ornithocephalus grandiflorus is a dwarf-growing and compact evergreen plant, having leaves of a rich bright green, and a somewhat dense raceme of bloom. The spike we have observed is a very long time in growing, but the flowers, when open, last a long time in full perfection. It is best grown in a small shallow basket or pan so that it can be suspended near to the roof-glass or upon a block of wood. We prefer the former, because these plants do not thrive so well upon the blocks of wood which we can provide for them, as they do upon the growing trees. In the pans or baskets, however, thorough drainage must be provided, and we use for

soil peat and chopped sphagnum moss. As with many of these small-growing Orchids, we consider it necessary to advise our readers to watch carefully for the first attacks of insects, and to at once set about their eradication, for if allowed to increase they will rapidly cause the leaves to become discoloured and fall away, and this, especially with the smaller kinds, is a matter of serious consideration.

CATTLEYA CITRINA AURANTIACA.—From Mr. Measures, of The Woodlands, Streatham, we have received a flower which we certainly should not have recognised without a name, and it shows, too, that this old species is about to break out into varieties of quite a novel appearance. In growth the plant resembles the typical form, but the flowers are quite distinct, and of average size. The sepals and petals are spreading, nearly equal, not so thick in texture as in those of the species, and of a soft lemon-yellow; the lip is large, side lobes and the basal part of a rich deep lemon-yellow, and the front part of the middle lobe is of a deep orange-yellow, several raised lines of the same hue traversing the surface quite back to the disc. It is very handsome as well as deliciously fragrant, and is a variety to be taken note of and to preserve.—W H. G.

LÆLIA AMŒBA SCHRÖDERIANA

LÆLIA ANCEPS SCHRÖDERIANA.

[Plate 473.]

Native of Mexico.

Epiphytal. *Pseudobulbs* of great size, oblong-ovate, compressed, somewhat tetragonal, clothed with large membraneous sheaths of a silvery white; they are mostly monophyllous, but occasionally two leaves are produced upon a single growth; these are stiff and leathery in texture, and rich deep green in colour. *Scape* terminal, some two or three feet in length, terminating in a raceme of from three to five flowers, which are large in size, and remarkable for their great substance, the whole flower being of a soft delicate satiny white; the *petals* are much broader than those of the typical plant, and the *lip* is very broad, with rectangular obtuse side lobes, these latter streaked on the inside with forked lines of purplish crimson, the middle lobe having a raised fleshy plate, of a deep orange-yellow colour on the disc, emarginate in front. *Column* semi-terete, wingless.

Lælia anceps Schröderiana, *Reichenbach fil, in Gardeners' Chronicle*, 1885, p. 342. *Reichenbachia*, second series, i., t. 13.

This superb variety of the white-flowered *Lælia anceps* appears to be the very finest of its race, its growth being majestic, and its flowers large and of a very pure delicate soft satiny white. It does not appear to grow in that part of the country in which the typical plant abounds, but with many others of the white forms of this plant, it comes from the opposite side of the country, bordering upon the Pacific, which is somewhat warmer and more difficult of access. As a consequence, after the delays occasioned by such a long journey, the plants become much shrivelled and weakened, and they take a much longer time to restore them to health and strength, a point not sufficiently taken into account by the growers of these plants. The white varieties, however, are now becoming thoroughly established in our gardens, consequently they are blooming more freely, and their beauty is so exquisite, that it requires only to be seen to be highly appreciated. The variety whose portrait we now lay before our readers was drawn by our artist, Mr. J. N. Fitch, in the gardens of Baron Sir J. Henry Schröder, The Dell, Egham, where so many marvellous plants are brought together under the fostering care of Mr. Ballantine, and with whom it flowered for the first time in Europe about eight years since.

Lælia anceps Schröderiana stands out conspicuously as the giant of its race, for we have never seen a variety that approaches this one, either in the size of its pseudobulbs, or the expansion of its flowers, which are lustrously beautiful. The sepals and petals are pure soft white, and the lip also is white, saving in the side

lobes which enclose the column, the latter being streaked with four red rays of purplish crimson, and having a large raised fleshy plate on the disc, of a deep orange-yellow. The mid-lobe is deeply cleft in front, and undulated round the margin. As before remarked, this rarity comes from the Pacific side of Mexico, and as this part of the country is hotter than the side bordering upon the Atlantic, the plants under cultivation require more warmth, and we have no hesitation in saying that during the growing season the very warmest spot is the best for them. At the same time, the atmosphere should be maintained in a thoroughly moist condition, and the plants be fully exposed to all the sun that shines, with a free circulation of air. During the resting season the heat must be kept up in proportion, and the atmosphere should be considerably drier. At no time of the year, however, does this variety require, nor indeed thrive in, so low a temperature as the old and typical plant. The baskets in which the plants are grown must be well drained, and good brown peat fibre mixed with chopped sphagnum moss should be used for the soil. This plant in all its varieties is liable to the attacks of white scale, which congregates in the ancipital edges of the leaves at their base. If this pest is allowed to remain, the leaf turns yellow and falls away prematurely, thus robbing the plant of its grace and beauty; but if kept clean, the shining green leaves are very persistent.

J. Nugent Fitch. del et lith.

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ODONTOGLOSSUM PRIONOPETALUM.

ODONTOGLOSSUM PRIONOPETALUM.

[Plate 474.]

Native of U.S. Colombia.

Epiphytal. *Pseudobulbs* ovate, compressed, dark green, becoming furrowed with age, and bearing a pair of leaves which are linear-lanceolate, acute, keeled beneath, coriaceous in texture, about a foot long, and deep green. *Scape* erect, much longer than the leaves, many-flowered. *Flowers* large, measuring upwards of four inches across; *sepals* linear-lanceolate with entire edges, ground colour rich yellow heavily blotched and spotted with bright chestnut; the *petals* are broader and much toothed at the edges, but coloured after the same manner as the sepals; *lip* sub-panduriform, dentate on the edge, having a pure white blade and a large spot or blotch in front of the calli, and behind which the colour becomes of a yellow hue. *Column* slightly bent, with a few tooth-like projections on each side near the apex.

Odontoglossum prionopetalum, *Hort. Lawrence, Williams' Orchid Grower's Manual*, 6th ed., p. 459.

This plant, the portrait of which we now have the pleasure to lay before our readers, is very handsome, presenting a charming appearance with, and a striking contrast to, the many other flowers in the long series of Odontoglossums which are now found in our houses in the spring of the year. Its general appearance leads one to suppose that it is a variety of the polymorphous species known as *O. luteo-purpureum*, or a natural hybrid between it and some other species in the vicinity of its native home; and there are many plants now in our houses which appear to have had a similar origin, but the mystery of their birth must remain in doubt until the home-raised seedlings produce their blooms. In this manner the origin of one natural hybrid has been verified beyond a doubt, for the plant which has been called *O. Leroyanum*, raised by M. Leroy, gardener to Baron Edmond de Rothschild, Armainvilliers, in France, has come to be looked upon as exactly the same plant previously named *O. Wilckeanum* by Reichenbach. It was a supposed hybrid between *O. crispum* and *O. luteo-purpureum*, which proved to be the case, but the area over which the latter plant is spread in the mountains of New Grenada renders it one of the most variable plants, and as it allows so many other species to be intermixed with it, it is not safe to predict the parents of any plant from the various stations in which it is found. The example here figured flowered in the collection of G. Hardy, Esq., Pickering Lodge, Timperly, Cheshire.

Odontoglossum prionopetalum is a compact-growing evergreen plant which was first flowered by Sir Trevor Lawrence, Bart., in his beautiful garden at Burford Lodge, Dorking. It is a plant of a hardy and strong constitution, and it thrives well under the coolest treatment. It should be potted in well-drained pots in a compost consisting of good brown peat fibre and sphagnum moss, the latter being chopped up in order to facilitate its mixing with the peat fibre. The compost should rise in a cone-like mound above the pot's rim, and the whole pressed down firmly. The plant enjoys a plentiful supply of water at its roots and moisture in the atmosphere during the summer months, and it should not by any means be allowed to become dry during the winter.

ODONTOGLOSSUM URO-SKINNERI ALBUM.—A flower is sent us by Mr. Osborne, who was formerly in charge of Mr. Buchan's collection of Orchids at Wilton House, Southampton. This flower is from a plant raised by him some years ago when at Wilton House, and we remember being shown the plant then, before they had made any foliage, and we were told they were not crossed. The plants grew rapidly, and they so exactly resembled *Odontoglossum Uro-Skinneri,* that they were eventually sold by Mr. Stevens, at the disbursement of Mr. Buchan's collection, for this species. The first one has now flowered with Major-General Berkeley, who inclines to the belief that it has been crossed with *O. Rossii,* but we can see no reason to suppose such an origin for the plant. In habit of growth it is exactly like the typical plant, and the sepals and petals are quite normal in size and shape, keeled behind, and of a clear greenish yellow; lip clawed, broadly cordate and pure white, by which it makes quite a divergence from the typical plant. The lip measures upwards of an inch and a half long, and more than an inch in breadth. Is this not the first seedling Odontoglossum that has bloomed in England? The plant that was raised by the Messrs. Veitch, of Chelsea, proved to be the same as *Miltonia Bleuana,* raised in France; and the *Odontoglossum Leroyanum* proved identical with *O. Wilckeanum,* so that I think this plant, which was raised by Mr. Osborne, is the first seedling that has bloomed in England.—W. H. G.

J.Nugent Fitch del.et lith.

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VANDA TERES ANDERSONI.

VANDA TERES ANDERSONII.

[Plate 475.]

Native of North Eastern India, &c.

Epiphytal. *Stems* erect, ascending, as thick as an ordinary goose-quill, attaining many feet in length, producing somewhat distant alternate cylindrical leaves, and from opposite these it throws out branching aerial roots and flower stems; the large blooms are produced on short racemes of from two to eight in number, although the latter quantity is rarely seen, each flower measuring fully four inches across. *Sepals* and *petals* oblong-obtuse, undulated and spreading, the petals somewhat larger than the sepals, rosy purple with a lighter margin; *lip* three-lobed, large and conical, the side lobes erect, enclosing the column, yellow within, streaked with crimson, middle lobe clawed, deeply emarginate in front, where it is rich rose colour with deeper veins, the disc also streaked with crimson. *Spur* shaped like a funnel, slightly compressed at the sides.

Vanda teres Andersonii, *Williams, Warner's Select Orchidaceous Plants*, iii., t. 2. *Williams' Orchid Grower's Manual*, 6th ed., p. 609.

This distinct and beautiful old species flowered for the first time in this country in the gardens of His Grace the Duke of Northumberland, at Syon House, Isleworth, in the year 1836. At that time these gardens were celebrated for their great and valuable collection of tropical fruits and flowers, which has, however, since met with sundry vicissitudes; they are now in charge of Mr. Wythes, who is apparently striving to again restore their ancient prowess. From the Syon House collection, staged at the Royal Horticultural Society's exhibition, held at the Temple Gardens in May of the present year, a plant of *Vanda teres* was shown, having eight flowers on one raceme, which we think is a very unusual number. The plant appears to be yielding to the more rational treatment of growers, by flowering profusely and well, as witness the specimens that were staged by Mr. Ballantine, from Baron Sir J. H. Schröder's collection, and by Mr. White, from the garden of Sir Trevor Lawrence, Bart., at the last Temple Show. Generally speaking, this variety is more free in flowering than the typical plant. The finest example that we know of, was grown by J. Broome, Esq., when he was living at Wood Lawn, Didsbury; it had no less than 250 flowers, all open at the same time. The greatest number of flowers upon one raceme, however, that we remember to have seen upon this specimen was six in number. Neither *V. teres* nor its varieties can lay claim to any beauty when not in flower, but when its blooms are expanded, their large size and soft delicate colour all tend to make it one of the most beautiful plants that we know. The specimen here figured by our artist, Mr. J. N. Fitch, was a very small one that

flowered in the Victoria and Paradise Nurseries, early in the present year, and which, with many others both of the typical plant and its various forms, bloom with us annually.

Vanda teres Andersonii presents no difference in its habit of growth from the typical plant, but it is somewhat more free in flowering, its flowers are larger, and the colours richer and brighter. It may be described as a plant of a rush-like habit, with stems and leaves resembling each other; these scramble up the trunks of the trees in the hot damp jungles, and fix themselves in position by roots, which are freely produced from the stems. When in flower it presents a splendid appearance, lasting in full beauty for a month or six weeks. The plants require to be grown close to the glass, with full exposure to the sun, and plunged in sphagnum moss; they should be syringed several times during the day, as well as being kept well supplied with water to their roots. The temperature during this time may range very high, but the ventilators must be freely used should the thermometer exceed more than 90° or 100°. During the winter months, besides stopping the syringing, and keeping the plants very much drier at the roots, we allow the temperature of our houses to fall as low as 60°, below which we do not like to see the temperature fall, and under these conditions we annually have a good crop of flowers. Our own plants are grown in a house where Crotons are cultivated exposed to the full rays of the sun. As soon as they reach the glass they are cut down and re-potted. Under these conditions they produce their blooms freely when only eighteen to twenty-four inches high.

Veitch Photo. Chelsea, S.W.

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PLEUROTHALLIS ROEZLII.

PLEUROTHALLIS ROEZLII.

[Plate 476.]

Native of Sonson, New Grenada.

Epiphytal. *Pseudobulbs* nil, having in their place long slender stems, which are enveloped in pale brown spotted sheaths, and bearing upon the apex a single oblong lanceolate leaf, which is thick and leathery in texture, carinate beneath, some six inches or more long, and of a bright lively green. *Peduncles* erect, about nine or ten inches long, becoming bent with the weight of the flowers, and having at the base of each flower a somewhat large membraneous bract, which is of a pale brownish hue. *Flowers* drooping, only partially expanded, of a deep purple-plum colour; *sepals* oblong-ovate, concave, keeled on the back, the lateral ones connate, forming one broad oval sepal; *petals* smaller than the sepals, of a rich vinous purple; *lip* hidden, lingulate, pubescent at the point, with the margins at the base incurved. *Column* white.

Pleurothallis Roezlii, *Reichenbach fil* in *Linnæa*, xli., p. 13. *Godefroy's Orchidophile*, 1888, p. 80.

Pleurothallis laurifolia, *Reichenbach* in *Xenia Orchidacea*, ii., p. 31.

The present plant belongs to a very large genus of Orchids which is exclusively confined to Tropical America and the West Indian Islands. Many of these plants are simply tropical weeds, having nothing at all to recommend them to the notice of the lovers of plants; a few, however, are worthy of a place in the collections of the curious, and amongst these may be named such kinds as the beautiful little *Pleurothallis Grobyi*, *P. picta*, *P. insignis*, *P. longissima*, *P. prolifera*, and some others. The species we here wish to direct the attention of our readers to is one of the largest flowered and most beautifully coloured of the family, which comprises several hundred species and varieties known to science. This plant was originally found by Roezl in and about Sonson, growing on the moss-covered masses of granite which are there found scattered about in profusion. Sonson lies at a considerable elevation in the mountains of New Grenada, where there is usually, we are told, a heavy dense fog in the morning, the thermometer frequently falling below 32°, consequently the plants will grow in a very cool atmosphere under cultivation. The plant first became known to us in 1885, when exhibited in the spring of that year by M. Godefroy Lebœuf, of Argenteuil, near Paris, before the Royal Horticultural Society; but the example from which our figure was taken, flowered in the establishment of M. A. A. Peeters, of Brussels, where many fine cool-house Orchids are to be found in most excellent health and vigour.

Pleurothallis Roezlii is a dwarf-growing plant, with evergreen persistent leaves, and producing a drooping raceme of large flowers of a deep vinous purple, being more richly coloured than any other species known to us. We have seen the plant growing and flowering freely in the collection of Sir Trevor Lawrence, Bart., and various other growers in this country, but we have never been so captivated by it as we were at M. Peeters' establishment, during a recent visit to Brussels, when we decided to figure it in the ALBUM. As before remarked, this plant grows naturally in a very low temperature, and amongst strange surroundings, which it would be both difficult and unwise to endeavour to imitate in our glass-houses. We have often noticed, however, that many plants live well artificially, and thrive with us under very different conditions from those they are subjected to in a state of nature, this species, for example, doing well in the Odontoglossum house and with Masdevallias. With these plants, therefore, we advise our readers to place it, always selecting a situation where it will receive constant shade and moisture. The pots must be well drained, and have a thin layer of peat or Polypodium fibre mixed with sphagnum moss.

ONCIDIUM WHEATLEYANUM.—This is a superb form, which we recently received from Mr. Wheatley, of Ringmore, Teignmouth, Devon. The spike bore some thirty flowers, each measuring about two inches across, which made a bright and imposing display. The sepals and petals are spreading, nearly equal, of a rich bright brownish crimson, bordered with yellow; lip broad and large, of a bright golden yellow, with a marginal border of dark chestnut-brown, the whole surface deeply and regularly corrugated. The crest and claw are stained with a deep blotch of maroon-crimson, which has a velvety appearance. This beautiful plant was purchased from an imported lot of *Oncidium Gardnerii*, when to the surprise of the owner this grand flower appeared. We hope he will succeed in keeping it and flowering it a second time. The plant was sent to us with the view of its portrait being laid before our readers, but it had unfortunately passed before its arrival.—W. H. G.

ONCIDIUM SARCODES.

ONCIDIUM SARCODES.

[Plate 477.]

Native of Sao Paulo, Brazil.

Epiphytal. *Pseudobulbs* somewhat cylindrical, slightly compressed, from three to six inches in length, enveloped with large white scarious sheaths, rich deep green. *Leaves* in pairs from the top of the pseudobulb, linear-oblong acute, some nine inches in length, deep shining green on the upper side, paler beneath. *Scape* erect, paniculate, attaining a height of from two to three feet, bearing many flowers which measure individually about two inches across. *Sepals* obovate, the dorsal one the largest, concave; *petals* obovate-spathulate, clawed, all of a rich, bright yellow, heavily blotched and spotted with bright chestnut-brown; *lip* three-lobed, the middle lobe large, undulated round the margin, emarginate in front, bright yellow, slightly spotted with reddish brown round the oblong crest and the small side lobes. *Column* white, furnished with triangular fleshy wings.

Oncidium sarcodes, *Lindley*, in *Journal of Horticultural Society*, iv., p. 266. *Id.*, *Folia Orchidacea*, Art. *Oncidium*, 20. *Select Orchidaceous Plants*, i., t. 23. *Lindenia*, v., t. 234. *Flore des Serres*, vi., p. 239, with fig. *L'Illustration Horticole*, 3rd series, t. 165. *Williams' Orchid Grower's Manual*, 6th edition, p. 500.

Oncidium Rigbyanum, *Paxton's Magazine of Botany*, xvi., p. 257.

This is one of the most brilliant and handsome of the smaller-flowered Oncidiums we know, producing its rich and gay-coloured flowers in great quantity, and which, being of good substance, remain in full perfection for a considerable time. It was exhibited in great numbers recently, before the Committee of the Royal Horticultural Society by Messrs. Charlesworth, Shuttleworth and Co., and the exhibit exemplified the value of the species in a marked degree. This plant was first introduced upwards of forty years ago from Brazil, coming to this country—like so many of the earlier importations of the Brazilian plants—from the port of Rio de Janeiro without any intimation of its particular whereabouts in that great country. Some few years ago, however, we received a consignment from a gentleman who had been collecting plants in the province of Sao Paulo, and the cases yielded plants of *Oncidium varicosum*, *O. prætextum*, *Cattleya Loddigesii*, and some plants which appeared to be *Oncidium sarcodes*. As the small-flowered and worthless *O. pubes*, however, so exactly resembles this latter species, we hesitated and wrote for information from the sender, who forwarded us some dried flowers, which at once removed all doubts from our minds, and enabled us to offer *O. sarcodes* with a degree of certainty which we otherwise could not have felt. Since then we have from time to time received additional consignments of this species from the same

party, so that its whereabouts in Brazil is well known, and we have great pleasure in publishing it for perhaps the first time. The plant from which our present illustration was derived flowered in the Victoria and Paradise Nurseries.

Oncidium sarcodes is a dwarf-growing and compact plant, having almost terete pseudobulbs, which are deep green, as also are the leaves. It is very free in flowering, we having frequently had two spikes arise from the same pseudobulb. Each spike produces many flowers, which are very gay-coloured, and equally well adapted for the public exhibition table as for decorating the Orchid house or the stove. The plant remains in full perfection for a month or more after opening its blossoms. The sepals and petals are bright golden yellow blotched with bright chestnut, the lip being large, and of the same clear golden yellow as the petals, but destitute of markings except near the base, where it is dotted with the same bright chestnut as the other parts of the flower. This plant having come to us with many cool-house species, we were induced to try it with cool treatment also placing it at the warm end of the Odontoglossum house, where it succeeds, admirably. We would therefore advise our readers to grow this species cool, when it will bloom more freely—indeed, we have observed that plants grown in a high temperature invariably throw up weak spikes, and the flowers lose much of their substance. Many persons advocate the block system of culture for this species, and although we are quite willing to admit that it will grow if placed under these conditions, yet, at the same time, we do not think they are the best we can provide for its welfare ; we therefore advise pot culture, but we do not imply pots of very large dimensions, because the plant is not a very free rooter. The pots should be well drained, using for soil good brown peat-fibre, from which all the fine soil has been shaken, mixed with some chopped sphagnum moss. The plant should be slightly elevated above the pot's rim, and during the growing season a liberal supply of water must be given, keeping it in a moist atmosphere. In the winter a less quantity is necessary, but do not by any means dry it entirely, for at this season the flower-spikes begin to show, and continue to increase in size until the blooms unfold in April and May.

PHAJUS COOKSONII

PHAJUS COOKSONII.

[Plate 478.]

Garden Hybrid.

Terrestrial. *Pseudobulbs* somewhat small, ovate, bearing numerous large oblong-acute leaves, which are from two to three feet in length, and of a rich deep green. *Scape* erect, longer than the leaves, deep green, furnished with several dark blackish brown acute bracts, and bearing near the summit from nine to twelve of its large and beautifully-coloured flowers, which last a long time in perfection. *Sepals* and *petals* oblong-lanceolate, nearly equal, the petals, however, are somewhat shorter and slightly narrower than the sepals; they are all white or light rose, with a shade of yellow, the deepest colour being along the centre; *lip* three-lobed, broadly oval, the basal half convolute over the column, where the colour is greenish yellow, the middle lobe having a crisped and beautifully undulated edge, emarginate in front, the recurved tips of the side-lobes of a deep rosy purple, the prolonged apical portion soft rose spotted with dark rosy purple, throat tawny yellow, which is prolonged in a central stripe to the apex.

Phaius Cooksonii, *Rolfe*, in *Gardeners' Chronicle*, 3rd series, vii., p. 388, fig. 57

This very beautiful and highly interesting plant is a garden hybrid, raised by Mr. Norman Cookson, of Wylam-on-Tyne, and to whom it is dedicated. It is the first true hybrid Phajus that has ever been raised, for although several other garden hybrids have been called Phajus by Professor Reichenbach, they had all been obtained between Phajus and Calanthe, and have now been removed to the genus *Phaiocalanthe*. This plant was obtained by crossing the well-known *Phajus Wallichii*, which is widely spread through the hot moist valleys of Northern India, and *Phajus tuberculosus*, a native of Madagascar, figured in this work on Plate 91. It was at that time a somewhat new plant, but since then it has been largely imported, and the cultural treatment necessary to its well-being has come to be better understood. The plant which we now have under consideration is one of exceptional beauty, and one that will always stand high in repute for the decoration of our stoves and Orchid houses. It appears to have been thoroughly crossed, for its growth and the style of its inflorescence evidently show the influence of its first-named parent, and the colour of its flowers partake more of the character of the Madagascar plant somewhat modified in shape, forming a chaste and charming flower. The specimen from which our present illustration was taken is in the collection of M. le A. Comte de Germiny, Chateau de Gouville, France.

Phajus Cooksonii is a bold-growing plant, possessing even when out of flower a

very ornamental character, but when the blooms are expanded its appearance is quite exquisite. It is a plant which requires good drainage, and should be potted in the same manner and in the same soil as *P. Wallichii*, *P. grandifolius*, and the other terrestrial species, viz., in a mixture of good loam and peat. During the growing season it enjoys an abundance of heat. We have kept it in the East Indian house, but we expect to find, as we become better acquainted with it, that it will withstand a cooler regimen with impunity during the resting season.

PHALÆNOPSIS ESMERALDA.—This is a very pretty plant from Cochin China, which we have already figured in this work, on Pl. 321. We recently received a fine spike and several single flowers of a paler shade of colour from Mr. Appleton, an amateur grower living at Tyn-y-Coed, Weston-super-Mare. The sender appears to think that one of the pale ones is a distinct form, because the flowers are more spreading, but this would appear to arise from the side lobes of the lip being flatter. We cannot, however, perceive any material difference in them. It is a beautiful little species, which although not so effective or showy as many others of this fine family, is yet well deserving the attention of every one having suitable accommodation for it.—W. H. G.

TRICHOPILIA HYMENANTHA.

TRICHOPILIA HYMENANTHA.

[Plate 479].

Native of U. S. Colombia, about Ocana.

Epiphytal. *Pseudobulbs* quite wanting. *Rhizome* short. *Leaves* tufted, thick and coriaceous in texture, narrowly sword-shaped, channelled above, rounded beneath, enveloped at the base in brown scarious sheaths, from six to nine inches long, and pale green. *Peduncle* slender, pendent, bearing a raceme of six or more flowers. *Flowers* an inch and a half across; *sepals* and *petals* about equal, linear-lanceolate, spirally twisted, pure white; *lip* broadly oval, flat, tapering to a point, coarsely fringed at the margin, the edge set round with close short teeth, white, freckled at the base with bright red spots.

Trichopilia hymenantha, *Reichenbach f.*, in *Bonplandia*, ii., p. 90. *Xenia Orchidacea*, i., t. 7. *Walper's Annales*, vi., p. 679. *Morren, Belgique Horticole*, 1874, p. 101. *Hooker, Botanical Magazine*, t. 5949. *Williams' Orchid Grower's Manual*, 6th edition, p. 592.

The present plant would not appear to have found great favour at the hands of the Orchid growers in this country, but we have more frequently observed this species in the various continental collections; indeed, Reichenbach records it as existing in the Schillerian collection forty years ago, and we ourselves saw it in the same collection thirty years ago, but it was not until some ten years later that we saw it flowering in the collection of Messrs. Veitch and Sons, of Chelsea. It appears to have been introduced by M. Linden, through his collector Schlim, and to have been disseminated through the continental collections before it came into our gardens. It is a delicate and beautiful little plant, not so large and showy as *Trichopilia lepida*, figured at Pl. 197, *T. suavis alba*, Pl. 14, nor *T. tortilis*, Pl. 349, but it is quite exceptional and singular in being the only species of the genus in cultivation which is quite destitute of pseudobulbs. Trichopilias are found principally in the mountains of Central America, although there are one or two outlying species; they are distinguished by the curious tufts of hairs upon the summit of the column, which has led to the name, meaning "hairy cap," and which suggested the name to Lindley, by whom the genus was established. Our present figure was taken in the fine collection of Orchids belonging to A. H. Smee, Esq., The Grange, Carshalton.

Trichopilia hymenantha is a dwarf-growing plant, completely destitute of pseudobulbs, but having a short creeping rhizome; it also produces a pendent spike of bloom, and for these reasons we recommend our readers to grow it in a hanging

earthenware pan, which must be well drained. The compost best suited to it is a mixture in about equal parts of good peat fibre and chopped sphagnum moss, raised into a cone-like mound above the rim of the pan, pressed firmly down, and the rhizome pegged down to the surface. It is a plant that likes to be kept in a nice moist condition, but it will not thrive if overcharged with moisture; ample drainage is therefore essential in order to carry the water quickly away. Coming from the cool Odontoglossum region, it will thrive well under cultivation with just similar treatment.

Dendrobium Phalænopsis Schroderianum.—The most massive and grand form of this plant which has come under our notice we recently received from Mr. Kerslake, who has charge of the Rev. E. Handley's collection at Bath, which we note, by the flowers that from time to time reach us from that establishment, is replete with excellent and, in many instances, unusual varieties of orchidaceous plants. The flower in question measured upwards of three inches across, the petals being very round and full, and with the sepals, was of a rich deep rosy purple, the lip being large and deep maroon-purple in the throat. This plant appears to thrive and to flower very freely and profusely under cultivation, providing sufficient heat, moisture, and light is given to it, which has agreeably disappointed most of the Orchid world.—W. H. G.

CATASETUM ATRATUM

CATASETUM ATRATUM.

[Plate 480.]

Native of Brazil.

Epiphytal. *Pseudobulbs* stout, some five or six inches high, in the young state clothed with numerous white membranaceous sheaths, and bearing on the apex several broadly lanceolate leaves, which taper slightly at both ends, and are strongly ribbed and dark green on the upper side, paler below, deciduous. *Scape* rising from the base of the young growth, erect, but eventually becoming nodding from the weight of the many-flowered raceme. *Sepals* and *petals* about equal, concave, oblong-acute, the ground colour of a somewhat dull grey suffused with yellow, over which is spread a profusion of purplish brown spots that become somewhat oblong and confluent on the outer side; *lip* thick and fleshy in texture, ovate, having a deep pit or cavity in the centre, the margin reflexed, dotted with brown and fringed with short stiff hairs of the same colour.

Catasetum atratum, *Lindley, Botanical Magazine,* t. 5202.

The plant of which we here give a portrait is a very fine coloured form of the species, and it is one that we now very seldom see in collections. Some few years back Catasetums were a favourite family of plants with Orchid growers, but latterly they have been eschewed by the majority of amateurs, the sombre hues of many of these now discarded plants having doubtless been the cause of their unpopularity. *Catasetum* is a very large genus, containing many handsome forms, some few of which we have laid before our readers in this and former volumes of this work, of which *C. Bungerothii*, Pl. 352, *C. Christyanum*, Pl. 83, and *C. macrocarpum* may all be taken as examples. There are also many others which rank equal to these for singularity and beauty, so that we are quite unable to account for the loss of popularity which has befallen them. We hope, however, to again see Catasetums take a foremost place, for we assuredly believe Reichenbach's assertion that "if Orchid-growers take Catasetums into their stoves they are sure to become more or less bewitched sooner or later." The species here figured flowered in the collection belonging to Major-General Berkeley, Bitterne, Southampton.

Catasetum atratum here portrayed is a somewhat small-flowered plant bearing a many-flowered raceme, and the blooms are not wanting in beauty. We cannot say what its other sex is like, never having seen it to our knowledge, but for the greater part the flowers are unattractive and inconspicuous; even such fine kinds as the new large-flowered ivory-white *C. Bungerothii*, when it produces flowers of the female sex, presents them small in size and of an uniform pale green, which but

for their curiosity would be peculiarly uninviting. All these plants like strong heat and a moist atmosphere during the growing season, but care must be taken to avoid wetting the young growths, for as the leaves imbricate or overlap each other, they hold the water, which lying in the growths causes them to become rotten and spoilt, and no amount of drainage at the roots can avail if water is allowed to accumulate in this manner. After the flowering and the growing season the water supply must be stopped, which will cause the leaves to turn yellow and fall away, when the plants may be removed to a much cooler house and be kept quite dry, except giving a little water occasionally in order to prevent shrivelling. Here they may be kept until the eyes show signs of moving, when they will require to be shaken out of their old soil and the dead roots cut away, repotting them into new soil, which should consist of brown peat fibre and chopped sphagnum moss, and using about the same size pot and well drained. Afterwards they may again occupy the old position for the growing season.

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ORCHID ALBUM.

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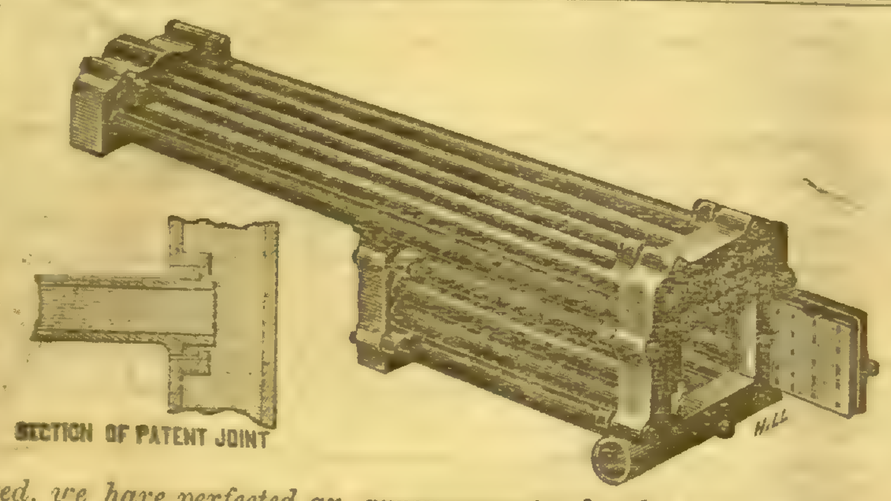

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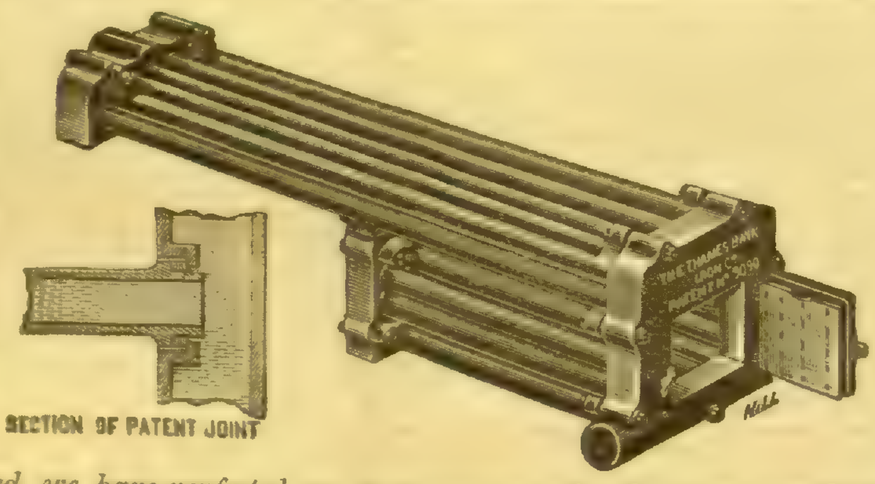

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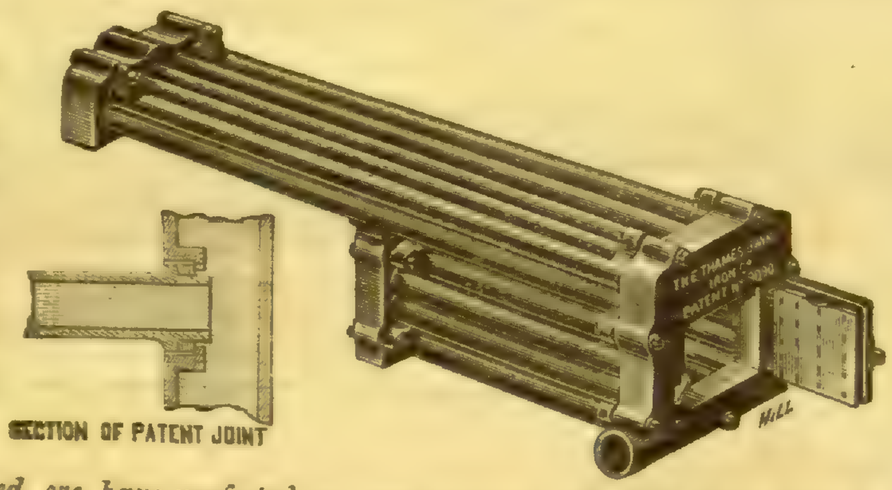

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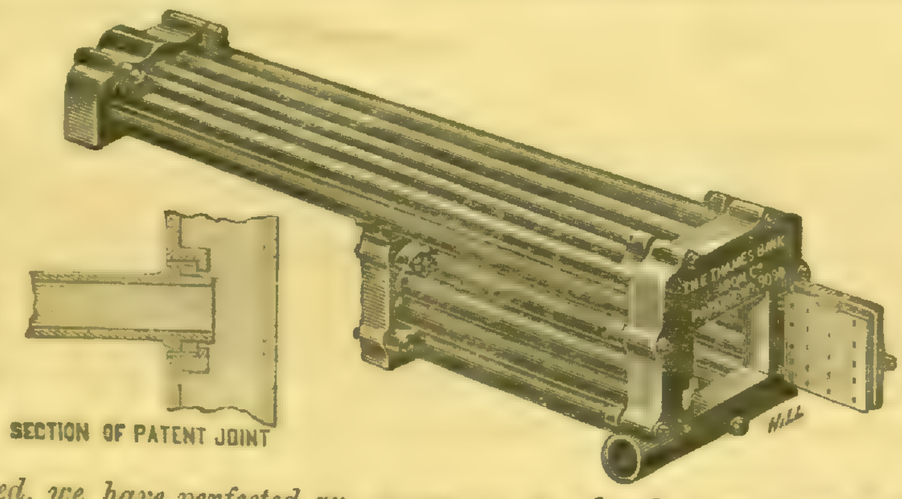

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Scarlet	95	0	10	0
White	45	0	5	0
Mixed, all colours	35	0	4	0

SINGLE TULIPS.

Crimson	45	0	5	0
Red and Yellow	70	0	7	0
Rose	95	0	10	6
Scarlet	55	0	6	0
White	65	0	7	0
Yellow	120	0	13	6
Mixed, all colours	35	0	4	0

CROCUS.

Large Golden Yellow	15	0	2	0
Large Blue	12	6	1	6
Large White	13	6	1	6
Large Striped	12	6	1	6
Mixed, all colours	10	6	1	3

SCILLAS.

Campanula, blue	25	0	3	0
Siberica, bright blue, very early	25	0	3	0

SNOWDROPS.

Double and Single	21	0	2	6

DAFFODILS.

Double	40	0	4	6
Single (*Lent Lily*)	17	6	2	0

JONQUILS.

	Per 1000. s.	d.	Per 100. s.	d.
Single Campernelle	42	0	4	6

NARCISSUS.

Pheasant's Eye	17	6	2	0
Double White	40	0	4	6
Biflorus	22	6	2	6
Incomparabilis (*Butter and Eggs*)	40	0	4	6
Mixed Hardy Narcissus	30	0	3	6
Polyanthus Narcissus, mixed	55	0	6	0

Anemone, Double, finest mixed	35	0	4	0
„ „ Scarlet	60	0	6	6
„ Single „	22	6	2	6
„ „ mixed	22	6	2	6
Chionodoxa Luciliæ	45	0	5	0
Fritillaria meleagris, mixed	65	0	7	6
Gladioli, mixed, early flowering	70	0	7	6
„ Colvilli albus	—		4	6
Grape Hyacinths	20	0	2	6
Hyacinthus candicans	—		10	6
Iris, English, finest mixed	45	0	5	0
„ Spanish „	17	6	2	0
„ German „	—		10	6
Ixia crateroides	40	0	4	0
Montbretia crocosmiæflora	—		10	6
„ Pottsii	—		8	0
Ranunculus, mixed, Persian	20	0	2	6
Spring Snowflake	45	0	5	6
Star of Bethlehem	20	0	2	6
Triteleia uniflora	20	0	2	6
Winter Aconites	17	6	2	0
Wood Hyacinths (*Blue Bells*)	21	0	2	6
Orange Lily (*L. croceum*)	—		21	0
Tiger Lily (*L. tigrinum*)	—		10	6
White Garden Lily (*L. candidum*)	140	0	15	0

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2½ „	1 3	4 „	2 3	7 „	5 0
3 „	1 6	5 „	3 0	8 „	6 0

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„ „ **sinensis**		42	0	63	0
Begonias, winter flowering		18	0	24	0
Bouvardias, of sorts		18	0	24	0
Camellias, of sorts		30	0	42	0
Carnations, Tree, of sorts		18	0	30	0
Citrus sinensis, with fruits		42	0	60	0
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Cytisus, very fine		18	0	30	0
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Hydrangea paniculata grandiflora		12	0	24	0
„ „ „ **standards**		30	0	42	0
Jasminum grandiflorum		30	0	42	0
Kalmia latifolia		30	0	42	0
Laurustinus, nice compact heads		18	0	24	0
Lilac alba virginalis				42	0
„ **Charles X.**		30	0	42	0
„ **persica**		30	0	42	0
Philadelphus coronarius (Mock Orange)				30	0
Primula sinensis alba plena		18	0	24	0
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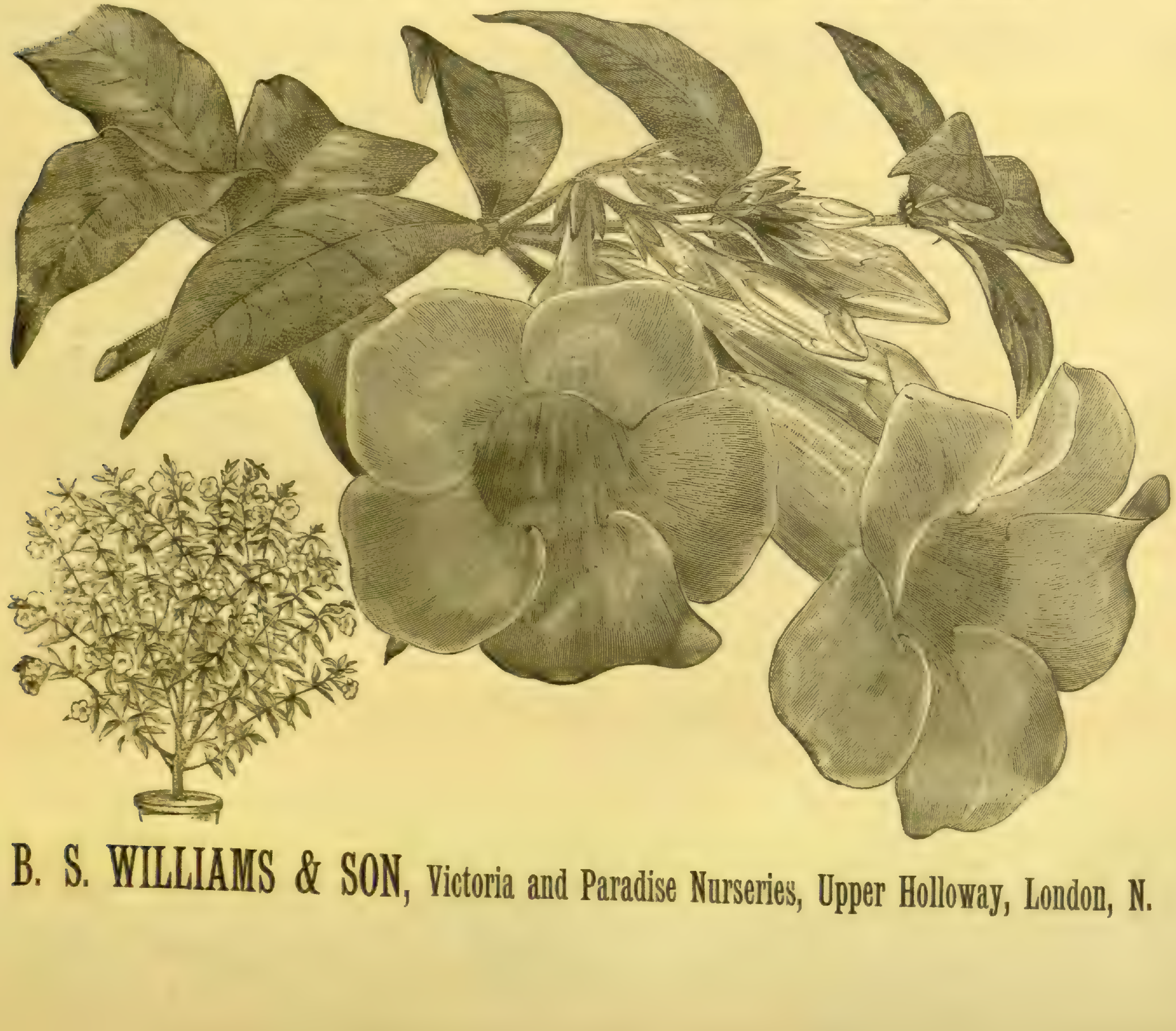

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Calceolaria, Williams' Superb Strain	1/6, 2/6, 3/6 & 5	0
Cineraria, Williams' Superb Strain	1/6, 2/6, 3/6 & 5	0
Cineraria alba	2	6
Cyclamen persicum, Williams' Superb Strain,	1/6, 2/6, 3/6 & 5	0
Cyclamen persicum, Albert Victor	2/6 & 5	0
Cyclamen persicum album	2/6 & 5	0
Cyclamen persicum, Brilliant	2/6, 3/6 & 5	0
Cyclamen persicum, Crimson King ...	2/6, 3/6 & 5	0
Cyclamen giganteum album	2/6, 3/6 & 5	0
Cyclamen giganteum Aurora (new)	2/6 & 5	0
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Cyclamen giganteum	2/6, 3/6 & 5	0
Cyclamen giganteum, mixed	2	6
Cyclamen giganteum purpureum	2/6 & 5	0
Cyclamen giganteum, Rose Queen	2/6 & 5	0
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Cyclamen giganteum rubrum	2/6, 3/6 & 5	0
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Primula sinensis fimbriata alba magnifica,	1/6, 2/6, 3/6 & 5	0
Primula sinensis fimbriata, Avalanche	2/6 & 5	0
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Primula sinensis fimbriata, Meteor	3/6 & 5	0
Primula sinensis fimbriata rubra violacea	2/6, 3/6 & 5	0
Primula sinensis fimbriata, Williams' Superb Red,	1/6, 2/6, 3/6 & 5	0
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Primula sinensis fimbriata, Williams' Superb Mixed,	1/6, 2/6, 3/6 & 5	0
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This extra fine variety has flowers nearly 8 inches in diameter, of bright crimson-scarlet, with a broad white stripe down the centre of each petal, turning into very soft green at the base; the lower portion of the petals striped with white. The flower is of perfect form and of the greatest substance, and will become one of the finest for exhibition.

Price 63s. each.

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This superb novelty is one of the finest productions of the establishment, and when exhibited at the Royal Horticultural Society was granted an Award of Merit as being distinct and finer than any other variety.

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CYPRIPEDIUM "ADONIS."

This charming little hybrid was raised in our Nurseries. It is a distinct cross between *C. Spicerianum magnificum* and *C. Harrisianum superbum.* It has been greatly admired when exhibited. In habit of growth it is not over strong, but appears to be very free flowering. The blooms are carried on stems about 6 to 7 inches in length, and are of medium size; the dorsal petal is a lovely green at the base and white in the upper portion, which is slightly recurved; the sepals are smooth, and the pouch small and of a bronzy green.

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CYPRIPEDIUM "CYTHERA."

A diminutive little gem, the result of a cross between *C. Spicerianum* and *C. purpuratum*, raised in our Nurseries; it is certainly one of the prettiest as well as one of the smallest in habit in our collection. The flowers, which are supported on stems about 5 inches in length, have the dorsal sepal white, with lovely green at the base, and in parts delicately suffused or veined with soft purple; the petals, which are long and narrow, are of a bronzy green tint, with numerous small dots at the base; the staminoid is purple, and the pouch of a deep bronzy green, with leaves slightly variegated.

It is one of the handsomest little plants we have been successful in raising, and has been greatly admired.

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This grand variety was exhibited before the Royal Horticultural Society on May 3rd, 1892, and we were unanimously awarded a First Class Certificate, it being the general opinion that no other white variegated Dracæna had yet appeared of equal merit, either for clearness of its variegation, or its freedom of habit and effectiveness. It is in appearance much like a *D. terminalis*, with leaves smoother and slightly narrower; these are of a deep green, edged and flamed with creamy white. The plant grows with great vigour, and as an ornamental plant appears in its way to be unequalled.

Price 31s. 6d. each.

DRACÆNA "H. E. MILNER."

This fine Dracæna, which was first exhibited at one of the International Shows at Earl's Court last summer, and was unanimously awarded a First Class Certificate, is of rather dwarf habit of growth. The leaves are stout, about 9 inches in length, and arranged closely one above the other on the stem. They are of dark olive-green, margined with deep crimson, and ornamented with bands of greenish yellow. It promises to be an exceptionally fine plant for table decoration.

Price 21s. each.

POINSETTIA PULCHERRIMA VARIEGATA.

Probably, if asked to name the most glorious plant in the stove in the middle of winter, or the one best adapted for decoration, a little reflection, and one would be sure to point to *Poinsettia pulcherrima*, the extraordinary brilliancy of whose bracts compels our admiration. In the plant now being offered for the first time, we have all the beauty of *P. pulcherrima*, with the added fascination of the golden variegation of its foliage, the deep green of whose leaves are edged with brilliant yellow, extending more or less towards the midrib, giving them the appearance of mosaic work, and not unlike the leaves of the lovely *Ficus elastica variegata.*

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Strong bulbs, price 63s. each.

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CONDUCTED BY

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AUTHOR OF SELECT ORCHIDACEOUS PLANTS,

HENRY WILLIAMS, F.L.S., F.R.H.S.,

AND

WILLIAM HUGH GOWER, F.R.H.S.

THE COLOURED FIGURES BY J. N. FITCH, F.L.S.

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OWN

NEW PLANTS FOR 1893.

AMARYLLIS "LADY ARDILAUN."

This is one of the most distinct and beautiful varieties we have yet raised. The flowers, which are about 8 inches in diameter, are perfect in form, and carried on a stout scape about 2 feet in height, which has from four to seven flowers upon it. The colours of these, which are highly contrasted by a distinct white ground, are cherry-red, becoming purple towards the base, the median stripe of white tinged with green at the base; the petals are of great breadth and substance, and the edges perfect in form.

Strong bulbs, price 63s. each.

AMARYLLIS "JOSEPH CHAMBERLAIN."

This extra fine variety has flowers nearly 8 inches in diameter, of bright crimson-scarlet, with a broad white stripe down the centre of each petal, turning into very soft green at the base; the lower portion of the petals striped with white. The flower is of perfect form and of the greatest substance, and will become one of the finest for exhibition.

Price 63s. each.

CALANTHE VESTITA OWENIANA.

One of the most distinct and beautiful winter-flowering Calanthes we have yet raised. In its general character it resembles *C. Veitchii*, one of its parents, the other being *C. vestita lutea*. It produces a fine spike with numerous large flowers. The lip, which is large, is a deep rosy crimson, with fine white eye; the sepals are nearly white, only lightly tinted with rose at the base; the petals are deep rosy crimson, faintly tinted with white at the points. This is one of our finest introductions.

Price upon application.

CLIVIA (HIMANTOPHYLLUM) "PRINCE OF ORANGE."

This superb novelty is one of the finest productions of the establishment, and when exhibited at the Royal Horticultural Society was granted an Award of Merit as being distinct and finer than any other variety.

These Clivias are unsurpassed for conservatory and house decoration, and can be forced into flower at Christmas or retarded till July. This splendid plant has fine broad foliage of the deepest green, with stout flower stalks, rising 2 feet, with immense trusses of brilliant orange flowers of fine form and substance. It forms one of the most imposing and beautiful plants we know.

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CYPRIPEDIUM "ADONIS."

This charming little hybrid was raised in our Nurseries. It is a distinct cross between *C. Spicerianum magnificum* and *C. Harrisianum superbum*. It has been greatly admired when exhibited. In habit of growth it is not over strong, but appears to be very free flowering. The blooms are carried on stems about 6 to 7 inches in length, and are of medium size; the dorsal petal is a lovely green at the base and white in the upper portion, which is slightly recurved; the sepals are smooth, and the pouch small and of a bronzy green.

Price upon application.

CYPRIPEDIUM "CYTHERA."

A diminutive little gem, the result of a cross between *C. Spicerianum* and *C. purpuratum*, raised in our Nurseries; it is certainly one of the prettiest as well as one of the smallest in habit in our collection. The flowers, which are supported on stems about 5 inches in length, have the dorsal sepal white, with lovely green at the base, and in parts delicately suffused or veined with soft purple; the petals, which are long and narrow, are of a bronzy green tint, with numerous small dots at the base; the staminoid is purple, and the pouch of a deep bronzy green, with leaves slightly variegated.

It is one of the handsomest little plants we have been successful in raising, and has been greatly admired.

Price upon application.

DRACÆNA COULLINGII.

This grand variety was exhibited before the Royal Horticultural Society on May 3rd, 1892, and we were unanimously awarded a First Class Certificate, it being the general opinion that no other white variegated Dracæna had yet appeared of equal merit, either for clearness of its variegation, or its freedom of habit and effectiveness. It is in appearance much like a *D. terminalis*, with leaves smoother and slightly narrower; these are of a deep green, edged and flamed with creamy white. The plant grows with great vigour, and as an ornamental plant appears in its way to be unequalled.

Price 31s. 6d. each.

DRACÆNA "H. E. MILNER."

This fine Dracæna, which was first exhibited at one of the International Shows at Earl's Court last summer, and was unanimously awarded a First Class Certificate, is of rather dwarf habit of growth. The leaves are stout, about 9 inches in length, and arranged closely one above the other on the stem. They are of dark olive-green, margined with deep crimson, and ornamented with bands of greenish yellow. It promises to be an exceptionally fine plant for table decoration.

Price 21s. each.

POINSETTIA PULCHERRIMA VARIEGATA.

Probably, if asked to name the most glorious plant in the stove in the middle of winter, or the one best adapted for decoration, a little reflection, and one would be sure to point to *Poinsettia pulcherrima*, the extraordinary brilliancy of whose bracts compels our admiration. In the plant now being offered for the first time, we have all the beauty of *P. pulcherrima*, with the added fascination of the golden variegation of its foliage, the deep green of whose leaves are edged with brilliant yellow, extending more or less towards the midrib, giving them the appearance of mosaic work, and not unlike the leaves of the lovely *Ficus elastica variegata*.

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